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ORIGINAL ARTICLES.

THE SURGERY OF THE ABDOMEN, WITH SOME OF ITS RESPONSIBILITIES.

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In these days, the closing decade of the nineteenth century; a century which has changed the whole face of civilization, and which has demonstrated by fact, that which it would seem could be but the revelation of a dream, it behooves those of us in life, whose part is confined to the healing art, to not only press forward, with the tide of progress, but we should also look into the retrospective, with a view of reaching a rational estimate of the position which we occupy, to-day.

The application of physics and chemistry, in manufactures, commerce, and the arts has wrought most marvelous changes. Steam and electricity, have annihilated distance; and with the rapid, onward pace of inventive genius, it would seem, that the time is near at hand, when they will wholly supplant manual labor, and entirely supercede animal force as a motor. An intelligent and broad comprehension of Nature's forces, has enabled us, to better understand, vital, physiological, and pathological processes.

While such enormous strides have been made, in the many and varied occupations of man, the healing art has kept well abreast, and in some respects, even ahead, in the race for brilliant achievements.

Experimental chemistry gave to humanity the the greatest boon, ever conferred—anæsthesia. By the aid of chemistry, with the use of the microscope, we need have no more *materies-morbi*. The morbid material is the same, as since the creation of man, but we separate, isolate and distinguish its varied elements, with rapidity and precision.

A better knowledge, and greater familiarity with the agencies of Nature have emboldened us, to explore regions of the body, which heretofore, had been regarded, through tradition, handed down to us, from one generation to another, as utterly and absolutely beyond the scope of human intervention; and bold indeed were the pioneers, who dared to defy the dogmas, of their age, and and push forward in the face of an unbroken opposition, and break, ground hitherto untrodden.

Among such were Nathan Smith of New Hampshire, and Ephraim McDowell of Kentucky, who about the same time, in widely separated sections of our country, in almost its colonial days, essayed to deal with ovarian tumor by abdominal section. Notwithstanding the rapid and successful progress of the ovarian operation, when all its technique were mastered; yet, surgeons whose pens have illumined the pages of medical literature, and whose names still adorn the profession, hesitated to open the peritoneal cavity for the relief or cure of any sort of neoplasm and condemned especially, every kind of interference, in cases of gunshot or penetrating wounds, of the abdomen. Sad, indeed, was the fate of him, whose bowels became obstructed, from within, or of the soldier on the field of battle whose abdomen, was torn open by shot or shell.

The prejudice of the older surgeons was so unanimous, and emphatic, in condemning interference, in these cases, that it seemed to savor of positive superstition. This appeared all the more so, when they could not well explain the grounds of their objections, and could only say that their experience had led them to this conclusion. In the meantime the microscopists were busy and had discovered a multitude of various pathogenic germs; and Lister had informed the world, how the development of these germs could be prevented, when in the proximity to wounds or traumatism. Now that the patient was spared the torture of the scalpel, by anæsthetics, and the contamination of the peritoneum rendered impossible, it was but natural, that the ambitious and enthusiastic young operator, would split up the mesial plane of the abdomen, with as little hesitation as he would open an abscess.

Indeed so far were distinguished and experienced surgeons carried away with the germ theory of disease, that not long ago they[1] maintained that surgery could scarcely attain further perfection; and a distinguished author says,[2] that greater

[1] Erichsen & Birg, latest edition.
[2] N. Senn, Surg. Bacteriology.

advances have been made in pathology, during the past fifteen years, than during the three, preceding centuries.

When serious, well-informed writers, will allow themselves to make such sweeping unfounded assertions as these, it can hardly be wondered at, that the average practitioner imagines that the millenium has arrived, and he can learn no more.

In no portion of the body, did operators more promptly and boldly put into practical application, those principles enunciated by modern investigators, than in that region in which are lodged the organs of digestion; and reproduction in the female; so frequently, and apparently successfully, that it certainly did seem for a time, that at last, the difficulty of dealing with lesions and growths — traumatic, and pathological — within the peritoneum, was solved. It was said that an exploratory incision, was harmless. An impression prevailed, that one might open and explore the recesses of the complex structure of the peritoneum, with as much impunity as one would raise the lid of a chest, and examine its contents.

As late, as a year ago, our journals, home and foreign, fairly teemed with reports of cases, involving the surgery of the peritoneum; from the learned and conservative professor, down to the humblest members, in the ranks. There were a few, however, who ventured to raise their voices, against what they conscientiously regarded as an abuse; arising from an indiscriminate performance of an operation, which has its limitation. But their warnings were unheard, in the din of the multitude; the new operation gathered fresh strength, and new adherents, until at last, it looked like rank presumption, for any one to question its merits. However, in the progress of time—not a very long time—a halt was called, and within the past year, many of its most ardent advocates, have discovered that very serious consequences may, and do follow abdominal section; and that in the hands of the careless or inexperienced, it may be followed by pathological conditions more serious, than those, for which it was undertaken to cure, or alleviate.

In the present instance I propose to consider briefly, the question of abdominal surgery, from a conservative standpoint.

It is indispensable at the outset, that we strive to master a practically comprehensive knowledge of that structure, designated the peritoneum; summarizing in as few words as possible, its gross anatomy, physiology and pathology. Histologically composed of endothelial cells, with a framework of fibrous tissue; in which are situated the serous follicles, blood-vessels, nerves, and lymphatics. In its entirety it is a gauze-like structure, translucent and elastic. It is composed of various layers, reflexions, and duplications. It contributes partly to the investment of all the abdominal viscera, with few exceptions; and gives off a coming to those stalk-like structures of connective-tissue, the ligaments, organic, and mesenteric, through which the blood-vessels, nerves, and lymphatics pass, in maintaining the nutrition of the parts, which they support and protect.

It has been described as the visceral and parietal and its cavity, in the male, is a hermetically closed sac. Besides, being supplied by the cerebro-spinal system, the nerves of the peritoneum are in free communication with the solar plexus, whose ganglia are within its folds, and supply all the abdominal viscera.

Physiologically the peritoneal cavity is lymph sac; in the normal state it is destitute of sensation. Its secretion serves the purpose of lubrication, so that the intermittent vesicular movements of the many and varied convolutions may be easily maintained. It will bear without detriment, especially in the female, very considerable distension, provided it is gradually applied. It is of varying dimensions, ever changing with the process of digestion. Its contents are of a solid, liquid, and gaseous nature. It is walled in or enclosed by bony and fleshy structures; the girth, or most dependent portion, consisting almost exclusively of muscular tissues, except, in the mesial plane, and in the inguinal regions. Many anatomists describe a median-line of fibrous composition, here, but there is none, strictly speaking in the male, or the non-child-bearing woman. Hence, except in the very limited areas stated, it is impossible to divide the abdominal walls without including muscular tissue.

Pathologically the peritoneum like all other serous membranes of its class, is exquisitely sensitive to irritants of every description, and is extremely intolerent to direct manipulation, of any degree whatever; resenting both, invariably, by active inflammatory action of a local or general character. Besides, in inflammations of metastatic type, we often meet with others, occasioned by contact with some of the organs diseased, which it infests.

Peritonitis of every phase or degree, is of very much more frequent occurrence in the female sex; with them it is comparatively seldom mortal, except, that septic variety, associated with the parturient state. Owing to the dangers of infection extending up the genital tract in woman; to lacerations and contusions, inflicted by the indiscreet or unskilled accoucheur in instrumental delivery, and lastly to the singular development of tumors, and degenerative processes, seen seldom except in woman, we may easily account for the greater frequency of inflammation, in this membrane, with them.

To account for the difference in mortality, in the sexes; we may explain it, in part at least, by the fact, that physical suffering, is much better borne, with woman. They survive a hæmorrhage, which in the male, must be inevitably

mortal, in connection with operations involving the peritoneum.

There is another factor which tells against the male sex, in this situation; which strange to say I have never seen mentioned by authors; I refer to the respiratory act, which in the male, is nearly, wholly abdominal, while in the female it is thoracic. The lower trunk of the latter, may be tightly and motionlessly braced, by a corset or binder, with comfort; which if applied to the male, would promptly induce asphyxia.

We all know, how quickly, and frequently fatal peritonitis is, with the sterner sex, when tympanitis is well developed, while a woman tolerates it, without very serious inconvenience.

Taking the abdominal contents as a whole, we find nothing anatomically, physiologically or pathologically, which indicates, that they are not, subject to the same mutations and influences, as other regions of the body.

THE TRAUMATIC SURGERY OF THE ABDOMEN.

It has usually been undersood in our profession that the duties of the surgeon commence, where those of the physician end; and that while it is impossible for the surgeon to ever attain eminence in his art, who is not thoroughly conversant with the properties, qualities, and actions of medicines, yet his aid is seldom invoked except when these have failed, or are inadmissable. Exclusively of traumatisms I question the propriety of the surgeon ever undertaking an operation of serious gravity, without, first consulting with the physician, for it is my conviction, that it is with the latter to decide, when to do an operation, and with the former, to perform it.

My experience latterly, has been, that this prudential course, is at present, being generally disregarded, very much it is feared, to the disadvantage of the patient. And in no class of cases in my judgment is this coöperation more essential and imperative, than in the lesions involving the peritoneum.

A man or woman is shot or stabbed in the abdomen; perhaps he is violently crushed; fallen from a great height, or has been run over by a vehicle; he has sustained a traumatism in the ventral region. The medical attendant is called. He finds his patient in more or less shock, and somewhat dazed. His pulse is quick, and thready, and he is alarmingly prostrate.

Now perhaps by a careful examination, one may be able to decide with some accuracy, the extent of injury. If a serious injury whether for instance, a solid viscus has been penetrated or lacerated, etc. The state of the abdomen may indicate, where no well marked constitutional symptoms prevail, whether there be extensive hæmorrhage.

Little more than this can be gleaned on an immediate examination. The physical diagnosis of abdominal lesions is an art, unlearnt. All is yet, uncertainty, doubt, and conjecture; and no living man can predicate what an abdominal incision will reveal, in a very large number of lesions. This state of affairs must remain, until the physics of acoustics is brought to the perfection of optics. The medical attendant will direct his attention towards giving his patient relief from pain, and tiding him over immediate shock. Now when distress has been appeased, and provided that death is not impending the physician is allowed a breathing spell. Perhaps for the first time in his life, he actually realizes what a severe abdominal injury is. The time for theorizing is past, the time to act, has come. Is his patient's vital current slowly draining away, into the peritoneal cavity? Has the bowel ruptured, or has the urinary bladder bursted?

If it appears to him that some one of these accidents have occurred, what will be done?

Will the surgeon wait on nature and treat the case on general principles or will he take time by the forelock and anticipate her?

If he is an orthodox antiseptist, and believes that septic contamination is the only danger, attendant on laparotomy, if he imagines that the deductions drawn from experiments on the lower animals are applicable to man; if he is ignorant of the serious consequences which may follow the mere handling of the intestine; then indeed he is guilty of positive, criminal neglect if he fail to make the exploratory incision.

Here and now, we come to the knotty part, of our subject, we have arrived at that point where it becomes imperative, to decide which road to take; which line that will lead to the safest terminus: whether or not, it may not, be as well to rely on nature's unaided powers, or whether having in mind the obscure character of all abdominal lesions, one is not justified in making an exploratory incision.

Until a very recent period the consensus of opinion was that if a laparotomy was done at all, in abdominal traumatisms it should be performed promptly; some even maintaining that it added nothing to shock. As a consequence, in the city of New York alone, within the past six years—from October, 1883, till October, 1889—thirty abdominal sections were made for penetrating gunshot and stab wounds of the belly.

The mortality attending those operations was something appalling, as we will later see; though with few exceptions they were done under every possible precaution, which all our well equipped hospitals provide, under the hands of skilled and veteran operators, with an ample corps of trained assistants, and nurses. Very few survived the ordeal. No doubt, but with many of the cases the wounds were mortal; but there are not a few, in which the intra-peritoneal injury was not extensive; and one of those reported, was a case in

which no lesions of any kind were discovered among the viscera; yet the patient succumbed, immediately on closing the main incision. Hence while none can doubt but the exploratory incision, saved a few lives, there can be no question, on the other hand while admitting this, that more than one life was cut short by efforts adopted to save it.

That this is not a statement of speculative conjecture, with a prejudicial bias, has been definitely settled by Dr. Lewis A. Stimpson's statistical and analytical monograph of last autumn, on "Penetrating Gunshot Wounds of the Abdomen." According to the figures there presented the mortality was, when the peritoneum was opened, much greater than when the cases were treated by the expectant plan. This may be partly explained, on the hypothesis that none were submitted to operation; but the worst cases. Against this, however, we have the evidence in many of the cases spared the scalpel, of grave lesions. In many of those cases it is more than probable that the patients or their friends' emphatic objection against any sort of evisceration stayed the operator's hand.

So much being conceded, with reference to operations involving the peritoneum, we should strive to seek out the causes which lead to disaster, and try to obviate or eliminate them, but before we leave this part of the subject, it may be well to investigate the processes by which the full functional activity of the parts may be restored by the *vis medicatrix naturæ*.

Shock follows all serious disturbances of the abdominal cavity. The vital powers, for a time are at a low ebb, and preclude every sort of violent interference, until reaction is well established. Next to bleeding in this situation, after an injury comes inflammation. This is always a serious sequel when extensive. Always perforation of the bowel is a serious matter, when it occurs below the ileo-cæcal valve, for here the final act of digestion ends and, only below here, do we find real fæces.

The intestinal contents during healthy digestion, above the cæcum, while capable of exciting acute inflammatory action, cannot, and do not, possess, the toxic, putrid properties of the lower gut, and in the dog at least, small quantities do no harm whatever, except to excite adhesive inflammation. As a rule, however, unless the intestine is extensively wounded, very little of its contents can escape. In gunshot wounds, the well-known valvular puncture made by the missile is immediately and permanently filled, by the contraction and evertion of the mucous coat, completely obliterating the rent. Simultaneously, with this salutory provision of nature, peristalsis ceases, while the work of repair is going on. If the patient survives, inflammation promptly ensues, and if of a limited and moderate degree its presence is indispensible as a factor of repair. The peritoneum possesses a most singular propensity when inflamed to take on adhesions with everything in which it comes in contact. It will wall off the sound from the diseased, in a most marvelous manner, in this way preserve the general cavity from contamination or invasion. If the inflammation take on a septic course, the patient is surely doomed; but much will depend on surroundings, the nursing, and medical attendance, for its development.

(*To be concluded.*)

THE SCIENTIFIC ASPECTS OF MEDICAL HYPNOTISM, OR TREATMENT BY SUGGESTION.

Read before the Chicago Medico-Legal Society, October 4, 1890.

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Mr. President and Gentlemen:[1]—

Of all the extensive additions made to modern therapeutics nothing seems to have attracted so much general attention as hypnotism.

Of all modern remedial measures hypnotism has secured perhaps the most numerous, zealous, and competent investigators: and yet it is without doubt the least popular with the profession. Since the time when chloroform was first employed as a means of reducing the pain of childbirth, nothing has occurred in the history of medicine of so revolutionary a character as the use of hypnotism. Nothing has excited at once so much expectation, apprehension, horror, hope, credulity and skepticism as the voluminous writings of the savants who have pursued hypnotic researches during the last eight or ten years; and yet it is by no means a new invention or discovery.

We are told that the practice of hypnotism dates far back into almost prehistoric times; and under various names and institutions it is supposed to have influenced generations of mankind. In ancient India, Egypt, and Greece it was practiced by the religious teachers who held it to be supernatural, and such teaching no doubt gave considerable power to the priesthood, and invested it with much authority in the estimation of the people. It is also supposed to have been the source of many of the tales of magic and miracle during the middle ages in the cure of disease and the relief of human suffering. However this may be, hypnotism, as it is known today, originated with James Braid, of Manchester. He demonstrated the fact that by fixing the attention or the gaze on any object, a person could

[1] This paper was prepared in compliance with the request of the President of the Chicago Medico-Legal Society, made to the writer in February, 1890.

be hypnotized, thus controverting the theory of Mesmer of the existence of a magnetic fluid which was supposed to pass from the operator to the subject in producing the condition known as the Mesmeric trance.

Thirty years ago Liebault, of Nancy, in France, was able to dispense with even the necessity of gazing at an object in order to obtain hypnosis. He found that the mere suggestion of sleep, made to a willing and susceptible patient, was sufficient to induce it. Prof. Bernheim who had studied the question with Liebault, and had accepted the latter's views, published a book on suggestions in 1884. He reported several examples of the curative effects of hypnotism, the phenomena of which he declared to be entirely of a psychical nature.

In 1878 Charcot began his public classes in which he drew attention to the physical states of hystero-epileptics during hypnosis. Among his pupils and followers, as we all know, are a great many distinguished French and German savants; but Charcot's researches had little effect upon the further pursuit of the inquiry. Not until the successful methods of the Nancy school had become known through Bernheim did the question become an active one throughout the civilized world. Hypnotism has now found an entrance into Switzerland, Belgium, Holland, Denmark, Sweden and Norway, into Russia, Greece, Italy, Spain, England, America and Germany. A really stirring activity has, however, only lately set in, and it began about two years ago when the publication of Forel's writings demonstrated the great importance of hypnotism for therapeutics. Since then upwards of 1,000 books and pamphlets have appeared, and the subject has claimed attention in almost every local medical society, and every National and International Medical Congress.

The hypnotic condition so nearly resembles ordinary sleep that Braid has designated it by its Greek synonym, and Liebault considers the two states as identical. Bernheim frequently mentions this fact: "There is nothing," he says, "by which to differentiate this induced sleep from natural sleep." Moll, however, does not so easily agree to an identification of the states. "I do not think," he says, "that we can make a close comparison between sleep and hypnosis. I think it a misuse of words (to say that hypnotized persons are asleep), since there are a whole series of hypnotic states in which not one symptom of sleep appears, and mistaken conclusions are often drawn from the mistaken terminology, with resulting confusion." That the sleeping is different from the waking state is evident, but as to how different careful study alone can determine. Dreams are due chiefly to nerve stimulation during sleep, that is, they are due to external suggestion. The character of the stimulation forms some part of the dream plot. Any description of sense-stimulation will result in dreams in which all the senses seem to take part; but as these impressions which contribute to the dream have not been balanced by the faculties, because of the dissociation of the receiving mind from the external world (intimate correspondence between which alone produces the consciousness of reality), there is no coherence, order, and substantiality in our dreams to resemble experience. It is rather of the character of a mirage than of a landscape perspective.

It is said that when the dream is light, the nerve stimulation producing the dream is remembered by the sleeper when he wakes, but that dreams in heavy sleep are not remembered.

These facts, I think, are also present and recognized in hypnosis, with this difference, that, whereas there is a great decrease of self-consciousness in sleep, this self-consciousness is just what remains intact in light hypnosis. In deep hypnosis the case is essentially different. It is characterized by sense delusions which are just the same thing as our ordinary dreams. The opinion that by far the greater number of dreams are induced by sense stimuli gains more and more adherence. This receptivity to stimuli which reach the brain unregulated by the consciousness and mistakenly interpreted, is a phenomenon of both sleep and hypnosis. The method employed to make external suggestion in hypnosis often suffices to induce dreams in sleep. At the most there is only a quantitative difference since most sense delusions are directly suggested in hypnosis, while in sleep dreams are caused as we have seen by some peripheral stimulus which undergoes special elaboration in the brain of the sleeper. As we find that the origin and purport of dreams are the same in sleep and hypnosis, it follows that in all probability the dreams of hypnosis are no more injurious to health than the dreams of sleep. But Rieger and Konrad say that hypnosis is nothing but an artificial madness. Meynert maintains that it is an experimentally produced imbecility. Luys compares it to general paralysis of the insane and others to "melancholia attonita." "These different comparisons," says Moll, "show the want of unanimity among authors, for the forms of mental disorder we call imbecility and mania are as unlike as a pea and a rose, which are both plants, but of utterly different kinds; and no two states of mental disorder could be more unlike than imbecility and mania." Moll in advocating his cause against the charges of these objectors argues as follows: "When hypnosis is thus compared to mental disorder it is generally forgotten that susceptibility to suggestion is the chief phenomenon of hypnosis. But it is a mistake to think that susceptibility to suggestion is an essential phenomenon of mental disorder; if

it were, mental disorders could be cured by suggestion, which is hardly ever possible. By means of suggestion in hypnosis forms of hypnosis may be induced which resemble mental derangement, *i.e.*, spontaneous mania or "melancholia attonita" beside forms of imbecility, etc. But we can also induce paralysis and stammering by suggestion, and yet hypnosis is not a state of paralysis or stammering. We can suggest pain in hypnosis, and yet hypnosis is not a state of pain. And how the light stages of hypnosis in which only certain motor effects are caused by suggestion can be called states of mental disorder is not clear to me, unless a person is to be called mentally unsound simply because he cannot open his eyes. But even the susceptibility to suggestion which exists in such mental disorders as delirium tremens or the kalanotic of Kahlbaum must not be without further ceremony identified with the susceptibility we find in hypnosis. I need only say "wake" to the hypnotized subject and the state ends; but there is no disease which can be guided and ended at a moment's notice like hypnosis."

A great many objections have been raised against hypnotism as a therapeutic agent. As I have already given Moll's answers to a few of these, I shall let him answer some of the other objections in his own words. He earnestly warns people not to consider hypnosis absolutely safe; others have said the same thing but have somewhat exaggerated the danger. This point he says must be seriously weighed. But it is never asked whether a remedy ought not to be dangerous; we only ask if we cannot avoid the danger by careful and scientific use of it. "What can never do positive harm can never do positive good," is an assertion made by Rust. This is to a great degree justifiable, though perhaps exaggerated. For I think I may say that there are few remedies in medicine which would not injure if carelessly and ignorantly used. There are even medicines which may injure however carefully used, because we do not know exactly under what conditions they become hurtful. I need not speak of morphia, strychnine and belladonna which have sometimes done injury even when the maximum dose was not surpassed. Neither will I speak of the dangers of surgical operations. I need only point out that an apparently harmless medicine may have very likely already done more mischief than hypnotism. Many deaths have resulted from the use of potassium chloride, and unfortunately this drug can still be bought and retailed without a medical prescription. Severe collapse has been observed after the use of antipyrin, antifebrine and exalgine. I will add to these one of the most recent medicines, sulphonal, which is supposed to be a perfectly harmless hypnotic drug. A death from it has recently been published. And Billroth has lately pointed out great dangers from carbolic acid, which is constantly used. If we gave up the use of these medicines we might give up medicine altogether, as everything employed might do harm. Whether there are dangers in the use of drugs or not is not the question. Rather we must ask, 1: Do we know under what conditions the danger appears? 2. Can we remove these conditions and the consequent danger? 3. If we cannot, does the advantage to be gained by the patient outweigh the danger he runs? The answer to these questions is in favor of hypnotism; we know perfectly under what conditions it is dangerous, which we do not know about some drugs; we are able in certain cases to exclude these conditions by using the proper and harmless methods and thereby preventing danger. But it may be objected that though a short use of hypnotism may not be hurtful, a long one involving a repeated induction of the state might be so. The objection is justifiable. But it might also be made against the use of various drugs, since we do not yet know whether a long use of them might not cause chronic poisoning. Experience is the only way to decide such a question, and Liebault, who has used hypnotism therapeutically for thirty years, has watched cases for a long time without finding any bad consequences.

Among the remaining objections to suggestive therapeutics the assertion that they do not produce any lasting impression or cure may be mentioned. This may be answered as follows: The results are by no means transitory; on the contrary a large number of lasting cures have been observed and published; the author himself having seen many cases where there was no relapse for years. One cannot ask for more. The objection that the improvement may be only temporary is thus not justified. But even were this so we must still rejoice to have found a way of procuring even temporary relief. In any case therapeutics are not yet so far advanced as to give us the right to reject a remedy merely because it only affects symptoms, or has often merely a temporary value. If we were to reject remedies which suppress the phenomena of disease for a time only, we might abandon a large part of therapeutics, perhaps the whole. Besides, from some methods of treatment nothing but a temporary improvement is expected, and yet this temporary improvement is considered to prove the value of the method. Remedies should not be weighed and measured by different standards.

A further objection to treatment by hypnotic suggestion is that there may be suggestions without hypnosis. This is exactly the standpoint which the school of Nancy have always taken up, although it is often difficult to distinguish between hypnosis and suggestion. This is the

heart of the present movement which shows us how extensive is the empirical use of suggestion in therapeutics. It is also the real reason of the strong opposition to hypnotism. We hereby see how often suggestion occurs spontaneously in ordinary life and medical practice. Hypnotism, by means of which we can make suggestions artifically, shows us what a great mistake has been made in estimating previous therapeutics, since we have neglected to consider the mental element in the action of the various drugs. The physiological effect only was regarded; it was quite forgotten that many remedies have only a suggestive value.

Ewald will not concede the same rank to suggestive treatment as to other methods, *e. g.*, electro-therapeutics, treatment by drugs, etc. Forel's reply to him refutes his objections. "Ewald," he says, "protested against the expression *medical treatment by hypnotism*. He said that medical treatment meant the medical art, and medical knowledge, and that every shepherd boy, tailor, and cobbler could hypnotize; only self-confidence would be necessary. I, for my part, think it right to protest against this way of treating a scientific question. Has not medicine drawn a countless number of its remedies from the crudest empiricism, from the traditions of the 'shepherd boys?' Cannot every cobbler inject morphia, apply blisters, and give aperients if he has the material? Yet we do not despise these remedies, nor baths, nor massage, etc. But Prof. Ewald deceives himself greatly if he believes that a delicate agent like hypnosis, which affects and modifies the highest and most refined activities of our minds, could be manipulated by a shepherd, or ought to be handed over to him. Medical science and psychological knowledge, the ability to diagnose and practice, are all necessary to its use. It is true that laymen have succeeded with it, just as charlatans have succeeded, and continue to succeed, in all provinces of medicine. Should we on that account leave the practice of medicine to them? Long enough, much too long, science has left the important phenomena of hypnosis to shepherd boys and their like; it is high time to make up for the delay, and to devote ourselves to a thorough examination of the series of phenomena which can complete our views of psychology and of the physiology of the brain. Medical therapeutics must not remain behind, when great results are to be obtained. But these results can only be obtained by a thorough study of the proper hypnotic methods."

The enthusiasm of the more ardent advocates of hypnotism on the one hand, and the skepticism of its opponents on the other, have left the matter in an uncertain state in the minds of many physicians. The clairvoyance of the mesmerizing mountebanks, the animal magnetism and electro-biology of a host of ignorant quacks, and the authority of Charcot concerning the transference of thought, the actions of magnets, and of drugs at a distance, have tended to throw discredit on the whole subject. False theories have been elaborated, and the most absurd explanations offered to account for some of the hypnotic phenomena; so that conservative physicians and physiological students who pride themselves on being orthodox scientists, turn away from this new fad and condemn what they cannot understand. Facts, however, are not to be rejected merely because the explanation offered of them proves to be unsatisfactory or even erroneous. But when the actions of the hypnotized patients may be readily explained without appeal to the marvellous, and without doubting the good faith of those who practice hypnotism, it is reasonable to inquire and examine, test and try, in order to ascertain if there is any likelihood of good to result from its use, and if so, to rescue it from incompetent hands, and put it in its proper place in therapeutics.

The word hypnotism seems to me to be incapable of exact definition. It designates all those conditions resembling natural sleep, but artificially produced without the aid of drugs. The methods of hypnotizing are either by uniform sensory stimulation or by suggestion. The easiest way is for the subject to fix his eyes upon some object which is kept near to and a little above him, so that he must converge and turn up his eyes to see it. This means will operate rapidly if the subject is expecting to be sent to sleep. But the hypnotic state may be induced without any sensory stimulation by simply suggesting to the subject that he is about to sleep, and if he is particularly susceptible, it is only necessary to stand in front of him, to look at him fixedly and to say "Sleep."

Many are hypnotized instantly, but some require half an hour or more. The more insusceptible cases need two, three, or even four sittings before they are hypnotized. Some people may be made to pass into the hypnotic state at a specified time after the suggestion. The successful instances reported by Beaunis are where the operator says, "I am going to count ten, when I get to six you will sleep;" or "Count to ten, when you get to eight you will sleep;" or "Go to that door, open it, when you have done so you shall sleep." Bernheim states that those who are easily affected may be hypnotized by writing to them, or by telephone. Those who are very susceptible need only think that they are about to undergo hypnotization, and they will become hypnotized; thus one may say to them, "You will be hypnotized in five hours," and when the time comes, they will pass into the hypnotic state.

There are different degrees of the hypnotic condition, and the school of Charcot and the Nancy school differ radically in their subdivi-

sions. It is difficult, however, to recognize any sharp distinctions, seeing that the degrees of hypnotism are merely according to the depth of the hypnotic sleep. The more simple and common-sense division would be into somnolence or light sleep, hypotaxia, or medium sleep, and somnambulism, or profound sleep. As a general thing, the sleep produced by suggestion, remains the chief measure for bringing the suggestion into complete action. Suggestion produces sleep or slumber; hardly is this present when the suggestibility increases as the result of the sleep, and usually so much the more, the deeper the sleep becomes.

In somnolence or light sleep, the individual is so slightly influenced that by employing all his energy he can resist the suggestion and open his eyes. In hypotaxia he can no longer open his eyes, but is quite conscious of his surroundings, yet he must submit to a part of the suggestions, or to all, with the exception of amnesia. Somnambulism, or deep sleep, is characterized by amnesia after waking, and by post-hypnotic phenomena.

Hypnotic phenomena are of a physical and psychical nature. The light hypnotic influence under suggestion will manifest effects on motility—inability to move, with contraction and automatic movements. It is more decided when it affects the will and causes automatic obedience. In a more intense degree, suggestion produces sleep or an illusion of sleep; and the yet more advanced degrees of suggestion affect the sensorial and sensory spheres, memory and imagination. On waking, the subject may remember nothing that has happened; or he may, if a hint is given to him; or he may easily recollect it all. He usually reacts to impressions that he receives through the senses, which are often very acute, but this reaction is entirely that of an automaton.

Suggestions can be made which shall take effect after waking. These are included in the term post-hypnotic suggestion. One may suggest that the subject on waking shall not see a certain person or thing, or that he shall be able to see the person but not hear him. These instances are examples of what is called a negative hallucination. Post-hypnotic suggestion is chiefly used in the cure of diseases, especially if they are functional, it being suggested to the patient that when he awakes from the hypnotic state he will suffer from none of his previous symptoms. It may be suggested that at some particular time the subject shall do this or that act. This is the suggestion *á échéance*. Beaunis gives an instance of a woman who acted upon a suggestion *á échéance* as long as 172 days after it was made.

Hypnotism produces no effect on the vasomotor system, but by suggestion in hypnotic sleep the strangest phenomena have been reported. Hypnotism increases the rapidity of the respirations, which, however can be diminished by suggestion. Increased susceptibility to suggestion, which hypnotism produces in the patient, gives it its chief claim to recognition as a therapeutic measure.

In short, the patient is an automaton in the hands of his physician. He feels what he is told to feel, his temperature is raised or lowered from one to three degrees F., and his pulse is rendered normal by suggestion. He forgets his troubles by suggestion, and by suggestion he experiences an agreeableness and comfort for which there is no actual physical warranty. Now in the name of all that is good, what else can a physician desire?

I have not said a word about the physiological explanation of hypnotic phenomena, or of the mechanism of suggestion. I leave this to the physiologists, and psychologists, who grace this assembly with their presence, and who are ready to take part in the discussion of hypnotism after I have done with my paper. All that I have briefly put forth here I have gathered from the writings and reports of others. It is a very imperfect presentation of the subject, as might be known by the perusal of anyone of some fifty works on hypnotism, and most of you are acquainted with them all.

(*To be concluded.*)

CASES OF PENETRATING STAB WOUNDS OF THE ABDOMEN; LAPAROTOMY; RESULTS.

Read at the Meeting of the Mississippi Valley Medical Association, at Louisville, Ky., October 9, 1890.

BY H. C. DALTON, M.D.,
SUPERINTENDENT CITY HOSPITAL, ST. LOUIS.

I report to-day six cases of laparotomy for penetrating stab wounds of the abdomen in which the viscera were injured, one death and five recoveries.

Case 1. Wound of Descending Colon and Ileum; Laparotomy; Recovery.—Edward T., colored, æt. 16, was admitted to the City Hospital July 23, 1890. Two hours previous he was stabbed with a long, narrow-bladed "chicken knife."

The wound of entrance was quite small and situated in the left iliac region, near the free extremity of the twelfth rib. Two inches of omentum protruded. The patient's general condition was excellent; there was but little pain; pulse 62, respiration 23, rectal temperature 100° F. Percussion gave dulness in the left lumbar and iliac regions. The liver dulness was greatly diminished.

After thorough antiseptic precautions, an incision 4 inches long was made in the left linea semilunaris. Considerable blood and fæcal matter were found in the cavity. There were two holes in the descending colon and one in the ileum.

The holes were closed by continuous iron-dyed silk sutures, the blood and fæces washed out, and the abdomen closed. A rubber drain was left in the wound. Recovery was uneventful. Patient was discharged well eleven days after admission.

Case 2. Wound of Mesentery; excessive Hæmorrhage; Laparotomy; Recovery.—Nathan B., æt. 29, admitted October 1, 1889, was stabbed an hour before admission, intestines protruding immediately upon receipt of the injury. In this condition he ran four blocks up a high hill with his assailant close upon his heels.

When admitted he was in profound shock, pulse 120 and quite weak, extremities cold; cold perspiration on forehead, temperature subnormal. Examination showed a mass of intestines (ascending colon and small intestine) protruding from a wound in the right hypochondriac region in the axillary line, 3 inches from the costal border. The mass was blue, almost black, and covered with dirt.

After thoroughly washing the intestines the wound was enlarged to the extent of 4 inches. A gash 2 inches long was found in the mesentery. One of the large vessels of the same was cut and bleeding profusely. This was tied, the wound in the mesentery closed with a continuous catgut suture, a large amount of blood washed from the peritoneal cavity, and the wound closed. A glass drainage tube was left in the wound. The temperature rose to 104° F. on the next afternoon, after which his recovery was uninterrupted.

Case 3. Wound of Cæcum; Fæcal Extravasation; Laparotomy; Recovery.—William W., colored, æt. 15, bootblack, admitted October 7, 1889. He was stabbed two hours before admission. His pulse was 80, small and soft; temperature 99.8° F., respiration 24; general condition excellent.

The knife penetrated an inch internal to, and a little above, the right anterior superior spine of ilium. An incision 2 inches in length was made at the site of the wound in the right linea semilunaris. A large ragged hole was found in the cæcum, as well as a considerable amount of blood and fæcal matter in the iliac and pelvic regions. The hole in the gut was closed by interrupted silk sutures, the blood and fæces washed out, and a glass drainage tube, reaching to the bottom of the pelvis, was left in the lower angle of the wound. The patient made a rapid recovery, temperature never going higher than 101° F.

Case 4. Wound of Descending Colon; Laparotomy; Septic Peritonitis; Death.—John W., æt. 27, admitted November 18, 1889. An hour before admission he was stabbed in the left lumbar region. Three inches of omentum protruded. The wound was enlarged sufficiently to allow of the return of the omentum, and an examination with the finger. No visceral wound could be detected by the touch. Patient's general condition was so good (pulse 80, temperature normal, respiration 20), that I was led to believe the intestines were uninjured, hence did not perform laparotomy.

The next morning, fifteen hours after the receipt of the injury, I was mortified to find my patient's abdomen distended, pulse and respiration fast, temperature elevated, and pain great. In fact, septic peritonitis was in full blast. I now did what I should have done at first, *i. e.*, made a free opening in the left linea semilunaris. The intestines were quite inflamed and adherent, blood and fæces surrounded the colon, and a large irregular hole was found in the posterior portion of the latter. This was closed and the abdomen washed out. But it was too late, for my patient never rallied, and died in a few hours from shock and peritonitis—the result of my timid, vacillating, unsurgical policy. Had I boldly opened the abdomen and made an *ocular* inspection, as I have since done in *every* case of penetrating stab wound, I believe a life would have been saved, and your reporter saved from making this humiliating confession.

I have condemned, and still condemn, Senn's hydrogen gas test in gunshot wounds of the abdomen, but in this case I am persuaded it would have been wise to resort to its use, as I believe it would have given affirmative results.

Case 5. Wound of Liver and Stomach; Laparotomy; Recovery.—Dred M., colored, æt. 18, admitted September 1, 1890. Two hours before admission he was stabbed in the abdomen. His condition was good, rectal temperature 100° F., pulse 72, respiration 32. He complained but little of pain.

The wound (a small one) was situated 3 inches above, and 2 inches to the right of, the umbilicus. An incision was made from the ensiform cartilage to the umbilicus. A wound ¼ of an inch in length was found on the upper surface of the liver, 2 inches from its lower border. Another wound of similar size was found on the under surface of the liver, separating the organ from a portion of the neck of the gall bladder. A third hole was found in the anterior portion of the stomach, near its pyloric end.

The wound on the upper surface of the liver was closed by a single heavy catgut suture. The suture was introduced ¼ of an inch from the wound, passed deeply into the liver substance, and out again ¼ of an inch on the opposite side. To close the lower wound a suture had to be passed into the peritoneal coat of the gall-bladder and deep into the liver substance. The hole in the stomach was closed by three interrupted silk sutures. A considerable amount of fluid and dark clotted blood was washed from the belly cavity. In spite of the fact that the apposition was good between the gall-bladder and liver, there was considerable oozing of blood from this point. To control this about 30 inches of gauze, 2 inches wide, was packed around it, the ends of

the strips were left protruding from the upper angle of the median incision. The surgical wound was closed by interrupted silk sutures.

The operation lasted three-quarters of an hour. Two hours after the operation the pulse was 84, rectal temperature 100° F., respiration 26. Little if any shock followed the operation. The gauze was removed on the second day and the drainage hole closed. He was not allowed to swallow water till the fourth day, except occasionally to wet his lips. Water and food were given per rectum. He was given fluid food per orum on the seventh day.

The patient recovered rapidly. His temperature never exceeded 101.4° F.; his pulse-rate was never over 100.

Case 6. Stab Wound of Liver and Intestine; Laparotomy; Recovery.—August F., æt. 21, bartender, was admitted August 21, 1890. He received three penetrating stab wounds an hour and a half before admission to the hospital. One wound was an inch below the costal border, and 4 inches to the left of the median line. Three inches of omentum protruded from this wound. The second was an inch above and 2 inches to the right of the umbilicus. The third was situated in the seventh interspace in the right axillary line. The patient was suffering greatly from shock; temperature subnormal; pulse 100 and weak; respiration 30.

The wound on the left side was enlarged to 3 inches, the omentum returned, and the intestine in the locality examined and found uninjured. The wound to the right of the median line was enlarged and a ragged hole of good size was found in the jejunum. This was closed by four interrupted silk sutures. As there seemed to be no fæcal extravasation, and but little blood, I did not wash out the peritoneal cavity, but contented myself with sponging the intestines in the neighborhood of the wound.

By slightly enlarging the thoracic wound I was enabled to determine that the liver was cut. A considerable quantity of dark blood followed the withdrawal of the finger. In order to reach the wound in the liver I resected 4 inches of the seventh rib, and split up the diaphragm 3 inches. This gave me a good view of the hepatic wound. There was considerable hæmorrhage from this point. By introducing a sponge on a long holder I managed to remove a good deal of clotted blood from this locality. The liver wound was an inch in length and about 2 inches deep. This was closed by one deep, heavy catgut suture, care being taken to introduce and withdraw the needle at least ¾ of an inch from the margins of the wound. Unless a good portion of the liver is thus involved in the suture, the latter will cut its way through when tied. For this reason, also, care was taken not to continue the tightening of the suture after the margins of the wound were approximated. The diaphragmatic and cutaneous wounds were closed by continuous catgut sutures. The closure of the wound of the diaphragm was rendered quite difficult in consequence of its movements during respiration. Drainage was not used. The operation lasted an hour and a half.

For three days the patient's pulse-rate remained at about 120, his temperature 102° F., and respiration 30. From this time on his recovery was uninterrupted. There was no peritonitis nor pleurisy. He was discharged well September 20, 1890.

I believe I made a mistake in this case in not making a median incision. I could then have closed the parietal peritoneum on each side, and could have accomplished all I did by the two incisions. By making the latter I doubled his chances for a ventral hernia. I fancy, however, there are few of us who cannot look back after an operation and see where we could have done better.

One point I desire to lay particular stress upon, *i. e.*, that in all penetrating stab wounds it is our bounden duty to go to the *bottom* of such wounds and *see* what damage has been done. It will not do to do as I did in the above fatal case, trust to the introduction of the finger and the *tactus eruditis*. Nor will it do to trust to the patient's general condition, for we have many times seen cases of gunshot and stab wounds with seemingly no perturbation, when in fact the patients were fatally injured.

Should a stab wound penetrate the thorax inferiorly, and in a downward direction, it behooves us to enlarge the wound sufficiently, even if we have to resect a rib, to enable us to determine whether or not the diaphragm has been penetrated. Should such be the case we should open the abdomen as near the site of penetration as possible. In other words, act as we should do when the peritoneum is penetrated through the abdominal wall. With perfect asepsis we can risk a great deal in abdominal operations. I believe it adds but little risk to a case of penetrating stab wound to enlarge it sufficiently to give us an *ocular* inspection of the parts beneath. It will not do to *guess* in such cases.

Since reporting my last cases of stab wounds I have operated eight times in cases in which there were no visceral injuries, all the patients recovering without an untoward symptom.

I would not be willing to place implicit confidence in the Senn gas test in such cases. Having been once deceived by it, I naturally doubt its infallibility.

Up to date I have done twenty-three laparotomies for penetrating stab wounds of the abdomen, with three deaths and twenty recoveries.

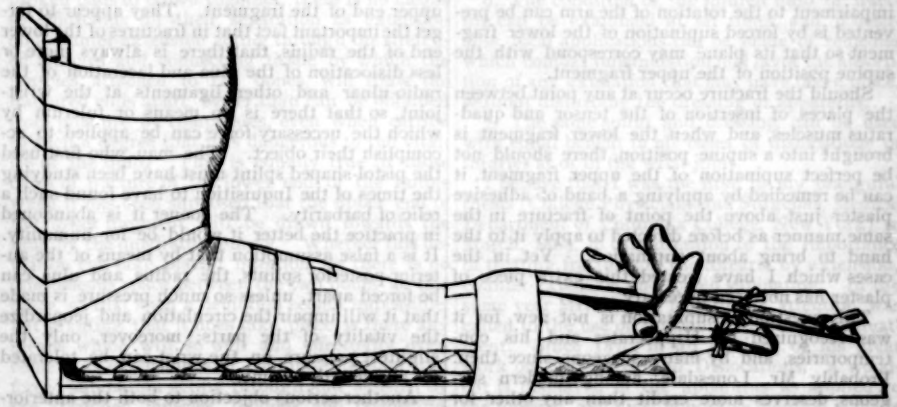
STATE PRELIMINARY EXAMINATIONS FOR MEDICAL STUDENTS.—Nearly three hundred persons attended the first State preliminary examinations in New York and Brooklyn this fall.

THE TREATMENT OF ALL FRACTURES OF THE FOREARM, EXCEPT OF THE OLECRANON PROCESS, BY EXTENSION, COUNTER-EXTENSION AND FORCED SUPINATION.

Read at the Annual Meeting of the Mississippi Valley Medical Association, at Louisville, Ky., October, 1890.

BY X. C. SCOTT, M.D.,
OF CLEVELAND, O.

In calling your attention to this mode of treatment I hope to convince you that it is superior to any other method, that you will not condemn it untried as an old doctor friend of mine did, and who said to me, "Doctor, it may be all right, but I do not think it will do because I have not tried it myself." Give it a fair trial and you will be convinced that it can be carried out in a simple manner and that it is better and far superior to any other method, by being adapted to every form of fracture of the forearm, except that of the olecranon process of the ulna.



The splint is made of two pieces of board fastened together securely at right angles. The shorter piece extending up the back of the arm about two-thirds the distance from the elbow to the shoulder, and the longer piece extends along the back of the forearm to four inches beyond the tips of the fingers. These pieces should be one inch wider than the arm and forearm and also well padded. The dressing of the limb is carried out in the following manner:

1. Two strips of strong adhesive plaster are applied longitudinally to the dorsal surface of the hand, commencing at the wrist or higher up, if the fracture is located higher, and extending beyond the tips of the fingers, are tied together at their free ends, forming a loop.

2. Two strips of adhesive plaster are applied in the same manner to the palmar surface of the hand and tied together.

3. The splint being well padded is applied to the dorsal surface of the arm and forearm. A broad piece of adhesive plaster is applied to the radial side of the forearm above the point of fracture and carried around behind the elbow and splint to the same point on the ulnar side, that it started from on the radial, and fastened. Crossed strips of plaster are also applied to keep the ends of the broad piece in place.

4. Another broad band of adhesive plaster fastens the arm to the upper part of the splint, and in addition I have been accustomed to throw a bandage around this part of arm and splint.

5. After the plaster is well set, the end of a piece of elastic rubber webbing, on the other end of which a buckle is fastened, is passed from the under surface through the opening in the end of the splint through the loops formed by the two strips of adhesive plaster on the dorsal surface of the hand, thence back through the opening in splint and carried forward over the end of splint, and back through the loops formed by the strips of plaster on the palmar surface of the hand, forward towards end of splint; and fastened by the buckle attached to the other end of this elastic band or strap.

The advantage of this procedure is, that should either the dorsal or palmar strips of adhesive plaster become relaxed or loosened, one or the other can be tightened without disturbing or affecting the other.

6. Thus having made extension and counter-extension, supination is easily accomplished by means of a strap of adhesive plaster one and a half inches wide applied to the carpal or bulbar portion of the hand, passing from the radial side

backwards around the splint to the ulnar side and thence to the front of the hand overlapping the place of starting. No other dressing is necessary except in cold weather; it is well to throw a bandage around the limb to protect it from the cold.

In all cases of fracture of the forearm there should be a careful reduction of the broken fragments before the splint is applied. This is especially true in regard to cases of fracture of the lower end of the radius and, in addition, when the fracture occurs at this region of the radius there should be a careful examination in regard to whether the ulnar is dislocated or not, and if found dislocated it should be reduced before any dressing is applied to the limb.

In every case of fracture of the radial shaft or of both bones that I have seen and examined, when they have been treated by either the anterior, or posterior, or both anterior and posterior combined, or pistol-shaped splint in the semi-pronated position, have shown more or less loss of supination, while pronation has not been affected unless there has been an anchylosis between the radius and ulna. The only way that this serious impairment to the rotation of the arm can be prevented is by forced supination of the lower fragment so that its plane may correspond with the supine position of the upper fragment.

Should the fracture occur at any point between the places of insertion of the tensor and quadratus muscles, and when the lower fragment is brought into a supine position, there should not be perfect supination of the upper fragment, it can be remedied by applying a band of adhesive plaster just above the point of fracture in the same manner as before directed to apply it to the hand to bring about supination. Yet in the cases which I have treated this extra piece of plaster has not been necessary.

This question of supination is not new, for it was recognized by Hippocrates and his contemporaries, and by many surgeons since then. Probably Mr. Lonesdale, among modern surgeons, deserves more credit than any other for his researches and calling the attention of the profession to the importance of the supine position in treating fractures of the forearm. It is surprising that modern authors, while recognizing the importance of this position, have not had the courage to come out firmly, condemning any other mode of treatment. Is it because that there are so many imperfect results from the methods of treatment that have been in vogue that they are afraid that they may be in danger of encouraging suits for malpractice? There seems no good reason why any one should cling to any form or method of treatment, which is acknowledged to give, in a majority of cases, impaired motion.

Every surgeon and anatomist recognizes the fact that the radius and ulna are as widely separated in the supine as in any other position of the two bones, and therefore in as little danger of an anchylosis taking place as if they were dressed or placed in a semi-pronated position.

Some who have not tried this mode of treatment may think that an arm dressed in a supinated position is less comfortable than in semi-pronation. This is a false conclusion—as the writer can testify from a personal experience; nor has he ever heard a patient complain on account of the arm being dressed supine but, on the contrary, in each and every case, the patients have expressed themselves gratified with the ease and comfort experienced from this mode of dressing.

For my own part I have never been able to comprehend why the pistol splint should have been invented or used in cases of fracture of the lower end of the radius, as it forces the hand into a constrained, painful and unnatural position. The surgeons who employ the pistol-shaped splint have deluded themselves into the belief that by forcing the hand into this constrained position, that they are enabled to elevate the upper end of the fragment. They appear to forget the important fact that in fractures of the lower end of the radius, that there is always more or less dislocation of the ulna and laceration of the radio-ulnar and other ligaments at the wrist-joint, so that there is no means or fulcrum by which the necessary force can be applied to accomplish their object. The man who first used the pistol-shaped splint must have been studying the times of the Inquisition to have found such a relic of barbarity. The sooner it is abandoned in practice the better it would be for humanity. It is a false assumption that by means of the anterior-posterior splints, the radius and ulna can be forced apart, unless so much pressure is made that it will impair the circulation and jeopardize the vitality of the parts; moreover, only the slightest pressure on the wrist can be tolerated for any length of time.

Another serious objection to both the anterior-posterior and pistol splints, is that the forearm is completely enveloped with bandages, and the condition of the fracture and limb cannot be examined, at any time, without removing all dressings and splints. Neither of these two kinds of splints are applicable to cases of fracture of both bones nor to cases of compound fractures where drainage is necessary. I question whether there ever has been a case of fracture of the shafts of both radius and ulna, treated by the anterior-posterior splints, that has recovered without more or less deformity and loss of motility, especially supination.

The broad angular splint and mode of dressing to which attention is called, allows an inspection of the broken limb at all times without removing the dressings or splint, and by making the neces-

sary opening in the splint affords the means for perfect drainage in cases of compound fractures. Dressed in this manner the fragments, in cases where both bones are broken, would be supinated and extended by the extension and counter-extension so that there would be no shortening caused by the overlapping of the broken ends, nor loss of supination from the upper fragments being supinated while the lower fragments are semi-pronated. If this angular splint is used, it will be impossible for any deviation of the fragments from any improper pressure of the sling in which the limb is carried, for the splint being made longer and wider than the arm and hand, the extension and counter-extension keeps the broken bone or bones fixed fast between two fixed splints, so that they cannot sag either towards the radial or the ulnar side of the splint, and thus receive any pressure from the sling on the hand or the shaft of the bone which will be detrimental.

It is easily understood, that when one or both bones are broken, and there is a tendency for the broken ends to crowd together, there is no means so efficacious for their separation as extension and counter-extension acting through the stretched muscles and connecting tissue by which the muscles attached to the bones, will draw the fractured ends apart, better than can be obtained from pressure by compresses, even when carried to such a degree that it is dangerous to the vitality of the limb. This is equally true in those cases of fracture of the lower end of the radius when it has been supposed that the upper end of the lower fragment will be drawn towards the ulna by the quadratus muscle. Whether this deviation can take place I question, for there is no interosseous space between the two bones at this place, so that such a deviation seems impossible, but granting that it does take place is there any means which will so well and effectually overcome it as extension and counter-extension and forced supination acting through and assisted by the stretched muscles, tendons and connective areola tissues surrounding the parts involved.

It is a well known fact, that with the ordinary way of treating Colles' and other fractures and injuries of the wrist-joint, there often remains in many cases, for a long time, if not permanent, more or less swelling, commencing at the upper margin of the annular ligament and extending upwards, caused by an effusion of lymph into the sheaths of the tendons and the areolar tissue around them. The anchylosis and permanent impairment of the wrist-joint, and in the use of the fingers, which frequently follows, can be prevented if treated as I have suggested in this paper; for passive motion can be made of the fingers and tendons from the time of the accident and the condition of the injured parts can be inspected daily, so that if the effusion of lymph and swelling becomes too great, application of remedies, which favor absorption, can be made without disturbing the dressings or splint.

Finally, what are the advantages claimed for this mode of treatment?

1. It is suitable to every form of fracture of the forearm, whether of one or both bones, either simple or compound, except that of the olecranon process of the ulna.

2. The apparatus is simple in construction and easy to apply.

3. It is more rational and meets all indications better than any other splint or form of dressing.

4. It meets and overcomes that impairment of motion, so frequently met with by surgeons, in fractures of the radius or radius and ulna, *i. e.*, loss of supination while pronation remains intact.

5. Because with its employment, passive motion can be commenced from the time of the accident and thus afford the best means of preventing anchylosis and stiffening caused by effusion into the sheaths of the tendons, impairing the usefulness of the wrist, hand and fingers.

6. The condition of the injured limb or fracture can be examined at all times, and, if desirable, local applications can be made of remedies which combat inflammation and favor the absorption of any exudation that may have taken place, without disturbing the dressing or apparatus.

7. The same splint and dressing can be used with equal benefit in all cases of dislocations or injuries at or of the wrist-joint.

I believe that I was the first, in my inaugural thesis (College Physicians and Surgeons, Medical Department of Columbia College, New York) in March, 1869, to call attention to the importance of treating fractures of the forearm by extension, counter-extension and forced supination. In the same year Mr. Frank Hamilton's attention was called to the use of this splint and mode of treatment. Since 1870, in all editions of his great work on "Fractures and Dislocations," a woodcut is displayed of the apparatus as applied to the forearm, and most honorable mention is made of it, both in the chapters on fractures of the radius and of both radius and ulna.

In Stimson's work on "Fractures," page 442, the same woodcut is displayed, evidently copied from Hamilton's work, and it is the only splint shown for the treatment of fractures of the shafts of both bones; yet, in reading his reference to it, although commendatory, I am compelled to say that this excellent author does not seem to comprehend the great and important principles in its use or application.

127 Euclid avenue.

A FRESH outbreak of influenza is reported from Copenhagen. Between Oct. 5 and 11 the number of cases known to have occurred was 34.

THE CLINIC.

REMOVAL OF A DERMOID CYST.

A Clinical Lecture, delivered at the Hospital of the University of Pennsylvania, October 8, 1890.

BY WILLIAM GOODELL, M.D.,
PROFESSOR OF GYNECOLOGY.

[Reported by LEWIS H. ADLER, JR., M.D., Resident Physician of the Episcopal Hospital; Late Resident Physician of the University Hospital.]

This woman is 22 years old; she appears to be quite strong and healthy-looking, but such is not the case. Her menstrual periods, for over four years, have been accompanied with a considerable amount of pain, and for the last eight months she has been practically a cripple. I have ascertained her trouble to be a tumor, about the size of an orange, situated in the ovarian region of the right side of her abdomen. This tumor seems to be adherent from every direction. She has been already under the care of many physicians, and has taken medicine of various kinds, but without any permanent improvement or alleviation of her severe suffering.

There has been some suspicion of venereal trouble; but in spite of our treatment, based upon this hypothesis, her symptoms have been growing worse and worse, and her pain more and more severe. The apparently large number of adhesions already noted as existing in this case would lead me to suspect a previous history of peritonitis, but I have been unable to elicit such an account.

Some years ago I would have hesitated to operate, in the manner proposed in this case, before such a large number of students, for fear of poisonous germs in the atmosphere, that might set up an inflammation and be deleterious to the patient. In addition to this fact, a few years ago I would have been afraid to operate upon a patient who was menstruating, lest there might be some germs present to induce sepsis. But now the dangers in both of these instances have been greatly lessened by the introduction of antisepsis, so that modern surgeons are highly gratified at the success that they have obtained with the proper observance of antiseptic precautions, even in the most crowded lecture-rooms.

In reference to an operation of election, I should always prefer to select a time when the patient is between her periods of menstruation; mainly on account of æsthetic reasons; for the danger formerly involved in operation performed during, or about, the menstrual period, is now considerably lessened under the new *régime* of treatment. Some surgeons go so far as to say that the danger is entirely annulled, and that you can operate as well at one time as another; but, in my opinion, this is carrying the matter a little too far, when hysterectomy is concerned.

The two great secrets of success in abdominal surgery are excessive cleanliness and deliberate care in the breaking up of adhesions. Sometimes, out of respect for public opinion, I use carbolic acid as a disinfectant (1 to 40 solution), but hot air and boiling water are the best germicides.

The patient before us has been carefully prepared for operation—the abdomen scrubbed and a vaginal douche of bichloride of mercury, 1 to 2,000, used; the bladder emptied and the pubic region shaved. It was formerly my custom to shave this region on the day preceding the operation; but as this needlessly alarmed the patient, I now defer it, as in this instance, until after the anæsthetic has been administered.

Everything being in readiness, the instruments immersed in boiling water, in which is a solution of carbolic acid; my hands and the hands of my assistants being chemically clean; I rewash the abdomen with a 1 to 1,000 solution of corrosive sublimate and, standing upon the right side of the patient, begin the operation by an incision in the median line of the abdomen. First, however, I estimate the thickness of the skin, so that I shall know exactly how deep down to cut, lest I should enter the peritoneal cavity. In making my incision, I am careful to direct it along the track of the conjoined tendon of the belly of the internal oblique and transversalis muscles, so that they will reunite without difficulty.

Having now cut through the skin, muscles and fasciæ, I come to the peritoneum, which latter lies behind the recti muscles, separated by a cellulo-adipose tissue. Before opening the peritoneum, the hæmorrhage incurred thus far is checked with catch forceps. While I am tying the vessels, I also have time for the woman to get over her present attack of vomiting; judging from the persistence of this symptom, I fear she has had something to eat since this morning. The danger of any food being taken shortly before an operation is that there may be large masses of food in the stomach, which, during the etherization, may be vomited up and drawn into the larynx, producing suffocation; or, if the incision in the abdominal wall be a large one, there is a possibility of some of the intestines being forced through the opening.

All possible antiseptic precautions having been taken thus far, and all the bleeding vessels secured, I now divide the præperitoneal fat—which is here thicker than usual—and then seize hold of the peritoneum with two forceps, raise it up nick it. The tumor is to the left side of the abdomen and behind the uterus. For this reason I am obliged to make the incision longer than is ordinary. Accordingly, I push the omentum aside and then proceed to empty the cyst, first taking the precaution to immerse the end of the aspirator in a 1 to 2,000 solution of the bichloride of mercury.

I now examine all of my instruments, in order to be certain as to their number and condition. As a general rule, little tumors are rather harder to operate upon than larger ones, for the reason that the working room is less.

The present tumor looks like a rare form of growth, called a dermoid cyst. Its contents are curious, and are very irritating to the lining membrane of the abdominal cavity; for this latter reason the greatest care has to be exercised in order to prevent infection of the abdominal cavity, and a consequent septic peritonitis. I shall keep the contents of this cyst for a further examination, as it is a very pretty example of this kind of a growth. It contains a small plate of calcareous matter, some light hairs, a nipple like that of the mammary gland, and some white cheesy-like substance, the exact nature of which I shall not be able to declare until it is examined microscopically.

This tumor is rather more difficult to remove than is the case in the ordinary run of similar operations, for the reason that it has a short and broad pedicle. Before cutting away the tumor I shall tie the pedicle with a provisional slip-knot.

We now ask ourselves: What are dermoid cysts? This is a question in regard to which pathologists have not yet become satisfied. We generally find in them hairs—most commonly of a light color, and teeth. We sometimes find in them bone fragments; but the most common constituents are hairs, teeth, and cheesy material such as comes from sebaceous glands, viz.: skin products, and it is for this reason that these curious growths are called *dermoid* cysts—in other words, skin-like tumors.

For a long time they were explained by what I call the "blasted theory"—partly because I cannot understand it, and partly because it contends that the epiblastic portions of an ovum, which form the skin, hair and teeth, become misplaced by dipping down into the hypoblast and becoming mixed up with other embryonic cells. Dermoid cysts are sometimes found in the testicles, but more commonly in the ovary, so that the theory is now gaining ground that they are, as a rule, developed from some addled human eggs; and it is no longer considered necessary, as it once was, that an ovum should have been fructified by the spermatozoa, in order for it to become the basis of a dermoid cyst.

Another theory once in vogue, was that of parthenogenesis, or virgin birth; that is to say, imperfect effort at transmitted fertility—a property peculiar to many insects—the aphidæ, for instance—one copulation being sufficient to keep up fructification for several generations of descendants. Let me here take the opportunity, while I am on this subject, to correct the statement I made in the beginning of my lecture, that this trouble in the case before us, was probably of specific origin, as this tumor abundantly explains all the symptoms, without an appeal to syphilis.

Let me also repeat what I said in the beginning of my lecture in regard to these cysts containing irritating substances and, therefore, more or less poisonous to the peritoneal cavity, the practical lesson from this being that when you are removing a tumor, and have even a suspicion that it is a dermoid cyst, you should take the greatest precautions, by the introduction of antiseptic sponges beneath and around it, to prevent the possibility of any of its contents escaping into the peritoneal cavity, wherein they will certainly induce a dangerous, not to say disastrous inflammation.

Having now counted the instruments and the sponges and removed the cyst, the pedicle of which I have tied with a carbolated silk ligature, passed through the centre of the stalk and tied upon either side, I am ready to close the abdominal walls. First, however, the abdominal cavity must be thoroughly cleansed, particularly in Douglas' pouch and in the peritoneal fold between the bladder and the womb, as otherwise peritonitis or septicæmia may follow. After this is done a large flat sponge is placed over the intestines, under the wound, in order to catch the blood that issues from the suture tracks. Each suture is double-threaded—that is to say, has a needle upon each end, which allows its being passed from within outward. Each needle is inserted about ¼ of an inch away from the edge of the wound, and I am careful to include in the sutures all the layers of the parietes, in order to avoid ventral hernia.

In this instance, I shall not use a drainage tube; these instruments are indicated in cases where cysts break during removal, in cases of serious adhesions, of old women with lowered vitality, or in septicæmia, and are always to be removed generally in from twenty-four to forty-eight hours, when the serum discharged is no longer bloody, but pink or straw-colored.

All the sutures having been inserted, the flat sponge previously mentioned is removed, and the abdomen reëxamined to see if any oozing has occurred; all being found dry, I now count the sponges and instruments again, in order to make sure that none are left behind within the cavity of the abdomen—finding the count correct, I catch in the hand all the sutures on my side, and my assistant does the same upon the opposite side. The edges of the wound are brought firmly together, and, at the same time, all the air is expelled from the abdominal cavity. Each suture is now tied by means of the surgeon's knot. As the abdominal walls are fat and thick, there is some eversion of the outside edges of the wound, so that I shall be obliged to insert a few additional superficial stitches, in order to hold the upper parts of the wound together; for, if we are

careful to get like parts in apposition—the skin connected with the skin, and the fasciæ with the fasciæ—we shall get union by the first intention; otherwise, if this precaution be not taken, the union will be by granulation.

The entire wound being closed, the ends of the sutures are gathered together in one hand and cut off several inches from the knots. I now proceed to dress the case with my favorite dressing, which consists of:

1. Powdered iodoform sprinkled over the surface of the abdomen, particularly into the umbilicus.
2. Sublimated cotton.
3. Broad adhesive strips of rubber plaster to hold the previous dressing in place.
4. A wide flannel binder, smoothly pinned with safety pins.

To-morrow at 1 o'clock, or within twenty-four hours, the patient is to have a cup of tea, and she will consider this the best cup of tea that she has ever tasted in her whole life. If she suffers in the meantime from collapse, she is to have sips of whisky. If she has excessive thirst, she will have enemata of beef-tea.

I trust that she will be able to get along without any opiate, because opium has the effect of stopping the bowels and the other emunctories; but, if she suffers very much, she is to have a hypodermatic injection of morphine.

After getting the tea to-morrow, she is to receive for the first few hours a dessertspoonful of milk, which is to be administered every hour; and, if it be well received, she will by nightfall be able to take one tablespoonful every hour for several hours, and then two tablespoonfuls every two hours. This quantity is to be gradually increased, so that by the end of the third day she will be getting during the twenty-four hours as much milk as she can retain and readily digest.

As I mentioned previously, she is to receive no opium, unless it is absolutely necessary to relieve pain, because it has the tendency to stop the bowels; moreover, though it was once considered necessary after these abdominal operations to keep the bowels closed for a week or more, such an opinion is no longer in vogue among medical men.

The bowels are to be moved on the second or third day, and the greatest precautions are to be taken in order to prevent any constipation in this case. She is to be urged not to hesitate to pass her wind, no matter who may be present at the time, lest the distended bowels exert a pressure upon the region of the wound and set up a peritonitis. If she does fill with wind, let the bowels be moved on the second day. For this purpose, I generally order a Seidlitz powder, adding to the contents of the blue paper a dessertspoonful of Rochelle salt. If she vomits, she is to receive large doses of calomel, for the reason that this medicine is heavy and not liable to be vomited. I give as much as 10 or 20 grs. at once and repeat it until bowels are moved, having given as much as 75 grs. during the twenty-four hours, feeling sure that, at least, a part of this heavy substance must have been kept down, however violent the vomiting may have been.

If the flatus be low down in the intestines and reachable, it is sometimes removed by the introduction into the rectum, or even higher when necessary—into the sigmoid flexure of the colon—of a flexible catheter. In any case, should tympanites or septicæmia become evident, let the bowels be moved. This latter condition is shown by peritonitis, by the pulse rising above 120, and the temperature going above 102° F., when ice is to be applied to the head.

Should obstinate vomiting occur, ice will be given or sinapisms applied to the epigastrium.

As a rule, it is necessary to catheterize for a day or so after these operations, but it is to be avoided as much as possible, as the too frequent use of that instrument is likely to cause an irritable bladder that is not easily amenable to treatment.

From a week to eight or nine days, the primary dressing will be ready to be removed and the stitches taken out.

MEDICAL PROGRESS.

STRYCHNINE IN THE TREATMENT OF WEAK HEART.—I have derived very great benefit in the treatment of weak heart from the administration of strychnine in gradually-increasing doses. I usually begin with a prescription consisting of 1 grain of the sulphate of strychnine to 1 ounce of dilute phosphoric acid, and of this I give the first day 10 drops three times, the next day 11 drops three times, and so on, increasing the doses a drop each day until some indication of the physiological action of the drug is obtained. This usually consists of a slight rigidity of the muscles of the neck or calves of the legs. The administration is then stopped for a day or two, and then resumed as before. This process may be continued as long as appears necessary. I am quite sure that I have frequently succeeded in giving tone to weak hearts when even digitalis has failed to produce permanently beneficial results.

Within the last few years I have made great use of cocaine as a heart tonic. So far as I know the first published account of its efficacy in this direction was made by Dr. Beverley Robinson, of New York, but I had employed it, for the purpose of giving tone to the heart, several years before his observations were made known. Its action in this respect is readily perceived by the stethoscope, the sphygmograph, and by feeling the

pulse. Moreover, its influence is markedly shown in the ability which it gives the patient to take increased exercise without suffering from dyspnœa or inordinate cardiac action. I usually begin its administration with a dose of ⅙ of a grain three times a day, and gradually increase this in the course of a month up to 1 grain. It is well, I think, to give it in combination with wine, although this is by no means necessary. I employ for this purpose the so-called restorative wine of coca, which consists of 2 grains of the hydrochlorate of cocaine to the pint of Malaga wine. A wineglassful contains ⅙ of a grain of cocaine. After this quantity is taken for two or three days, I have the patient add a powder of ⅙ of a grain to each dose, and so on until the total quantity amounts to a grain. In some cases it is not advisable to increase the dose. Cocaine, more than any other medicine with which I am acquainted, appears to possess the property of exhibiting its effects without any augmentation of the dose, and in such instances the original quantity may be continued indefinitely without deleterious effects. On the contrary, usually with marked beneficial results.—W. A. Hammond, *Therapeutical Gazette.*

THE ETIOLOGY AND TREATMENT OF TETANUS.—At a recent meeting of the Academy of Medicine M. NOCARD read a paper by M. PEYRAUD on this subject. M. Peyraud, having inoculated a number of rabbits with an infusion which he made from hay, says he was able by this means to bring on an attack of tetanus in 50 per cent. of the animals inoculated. The animals thus inoculated succumbed in the proportion of five out of every six. M. Peyraud has a theory that a chemical substance capable of exciting symptoms analogous to those caused by the invasion of the system by a given microörganism will prove by inoculation to be a vaccine against the ravages of the microbe. He has applied this theory to strychnine, considered as the vaccine against tetanus. His method of proceeding was as follows: He injected hypodermically for a period of five or six days a dose of strychnine, varying the dose according to the size of the animal and the appearance of the convulsions. The animals being thus prepared, he inoculated them with pus obtained from an animal previously dead of tetanus. Ten of such rabbits were inoculated; but, in addition to these ten already prepared, he inoculated, as a controlling experiment, four others not previously protected by strychnine vaccination. The whole four non-vaccinated ones died and three of the ten vaccinated. The death of three of the prepared animals was attributed to a supplementary injection of strychnine which proved too strong. M. Nocard repeated these experiments by following a somewhat different method. He prepared a pure culture of tetanic bacilli from a lamb. Then he took ten rabbits and injected under the skin of each, for five days in succession, ten drops of a solution of sulphate of strychnine of the strength of 1 in 1000. He next inoculated the ten with his bacillary culture, controlling the experiment by at the same time inoculating ten untouched rabbits with the same culture. The result, however, was that they all died in from three to five days. He repeated the experiment with slight modifications, but the result was not less disastrous. The conclusion, therefore, was obvious.—Paris Correspondence, *The Lancet.*

BLOODLESS TONSILLOTOMY.—PROFESSOR J. TOISON, of Lille (*Rev. de Thér. Méd. Chir.*, October 1), discusses the various methods of reducing or removing enlarged tonsils. He begins by saying that excision of the tonsils with the bistoury or the guillotine is gradually losing favor among surgeons on account of the risk of hæmorrhage. Ignipuncture with the thermocautery or the galvano-cautery is often useful, but should be reserved for cases in which the tonsils are only moderately enlarged and can be sufficiently reduced in one or two sittings, and for cases in which some anomaly of shape in the hypertrophied glands makes it difficult to remove them with a cutting instrument. For ordinary cases, Professor Toison uses a new snare of his own invention, which, according to him, effectually obviates all danger of bleeding. The apparatus consists of a *serre-nœud*, the metallic loop of which, instead of being free, is fixed by three silk threads to a blunt ring fixed to the distal end of the instrument. The ring is passed over the tonsil, which is then seized with forceps; the wire loop is next pulled home in the usual way, the traction being sufficient to snap the silk threads which fix it temporarily to the ring. The tonsil is thus cut through without bleeding. Professor Toison has performed this operation several time since last April; in no case has there been any hæmorrhage.—*Brit. Med. Jour.*

MERCURY DURING ALBUMINURIA.—The question as to whether mercury is likely to be injurious in cases in which albumen is present in the urine, is one of much importance to the surgeon as well as the physician. Many surgical complications occur to patients who are the subjects of chronic renal disease, and conditions are often presented in which, were there not a prejudice against it, mercury would seem to be desirable. I have myself chiefly been concerned with this dilemma in cases of syphilis, and have long been in the habit of prescribing mercury without much regard to the state of urine. Nor have I ever seen reason to regret doing so. The following quotation from a Report on Medicine by the late Dr. Prichard, of Bristol (1835), is not without its

interest in reference to this question. Dr. Prichard refers to cases in which dropsy was the condition requiring treatment.

"It seems to have been the opinion of Dr. Bright, and the observation was strenuously enforced by Dr. Blackall, that mercury is injurious in all cases of this description. I shall take the liberty to state that this question has been brought to the test of experiment, during several years, at the Bristol Infirmary. In numerous cases of dropsy, with albuminous urine, the treatment advised by Dr. Blackall has been fully tried, and it has failed to produce a cure; but the same cases terminated in recovery under a moderate use of mercurial remedies."—Mr. Jonathan Hutchinson in *Archives of Surgery*.

VAGINAL HYSTERECTOMY FOR CANCER.—FLAISCHLER (*Deutsche med. Wochenschrift*, No. 29, 1890) reports twenty cases of total extirpation operated upon in the past five years, with three deaths from sepsis. Seven patients had since died from the disease, and eleven had no recurrence, of whom six had been operated upon at least three years before. He insists upon greater care in the selection of cases, not so much because of the immediate as of the remote results of the operation. Only those are suitable for the radical operation in which there is strong probability that the cure will be permanent. It is not justifiable to remove every uterus which can be easily drawn downward when there is suspicious induration in the broad ligaments. Sometimes it is impossible to determine positively, even under ether, whether the perimetric tissues are involved or not, or to decide between malignant and simple inflammatory indurations in the broad ligaments. Under these circumstances it is better to give the patient the benefit of the doubt.

According to Volkmann, a patient can only be regarded as cured when three years have elapsed after the operation without recurrence, while Fritsch places the limit at six years. Tanner believes that while a patient may be said to be cured, it is only a question of a few or many years before the disease returns. Flaischler regards the latter view as too pessimistic, although sufficient evidence has not yet been accumulated to decide positively against it. He thinks that the total extirpation is no more dangerous than high amputation (!); the latter operation should be regarded as a transitional step in the development of the former, and is not to be compared with it.—*Am. Jour. Med. Sciences.*

EFFECT OF CERTAIN SUBSTANCES ON THE RED CORPUSCLES.—M. MAYET, of Lyons, read an interesting paper at the recent meeting of the French Association for the Advancement of Science, in which he gave an account of the effects of various neutral salts and of chloral on the red corpuscles of the blood. Solutions of the strength of 1 or 2 per cent. of chloride of sodium, chloride of potassium, sulphate of soda, phosphate of soda, bicarbonate of soda, and sulphate of magnesia all at first temporarily destroy the elasticity of the corpuscles and then dissolve or disintegrate the stroma. Solutions of the strength of 5 per cent. or more diminish the size of the corpuscles and harden them. The chloride of sodium has the most preservative primary action, but is most destructive on prolonged contact. As is well known, it has been recommended for washing the blood (in a 0.6 per cent. solution) in certain cases of poisoning. Sulphate of soda has a great tendency to preserve the chemical properties of the corpuscles, but makes them much more rigid than does chloride of sodium. It is not suited for intravenous injections, but is very useful in the laboratory for washing the corpuscles before preparing hæmoglobin from them. For this purpose it is better than the 3 per cent. solution of chloride of sodium, which is commonly employed, but which has a considerable tendency to dissolve the corpuscles. Chloride of potassium has a great preservative action, but cannot be used for intravenous injections owing to its toxicity. Carbonate of soda in weak solutions is very preservative. Phosphate of soda in weak solutions renders the corpuscles rigid for a long time; it preserves their form well, and so is useful in diluting the blood for the purpose of counting the corpuscles. Sulphate of magnesia does not dissolve them, but changes their shape more than any of the other salts. Hydrate of chloral is very destructive to the corpuscles when it is in a concentrated solution, but not when it is of less strength than 5 per cent. Intravenous injections of the latter, which may be repeated several times daily, are very valuable in tetanus, in uræmic convulsions, to calm the violent spasmodic attacks in rabies, and in some painful diseases where hypodermic injections of morphia are inefficacious or badly borne. Of course the effects on the heart, respiration, and urine must be carefully watched.—*The Lancet.*

ANTISEPSIS IN GYNECOLOGY AND MIDWIFERY.—DR. AUVARD (*Arch. de Tocologie*, August, 1890) describes his method of insuring clean instruments and preventing them from fouling when packed in their cases and boxes. The handles of the knives are of the same metal as the knives themselves; glass is avoided as much as possible, since it is less easy to disinfect than metal. Friction of instruments, after use, with emery powder is purely æsthetic. Soaping and brushing is necessary to wash off visible impurities, but the process does not destroy germs. Immersion in antiseptic fluids not strong enough to damage the metal is good, but not absolutely efficacious. Catheters and forceps may be thoroughly disin-

fected by fire, the instrument, well cleaned, being passed through the flame of a spirit lamp, or else a few drops of spirit may be poured into the metal box in which the instruments are packed. The flame must be applied for about a minute to the instrument. Boiling water is easily procured, and is good for knives, etc., which it does not spoil, but it tarnishes steel and nickel. The most perfect method, however, of rendering these delicate instruments aseptic, is the stove. The *autoclave*, or compressed vapor stove, is not so good as a dry-heat stove like Poupinel's. The instruments, laid out in a metal box, should be left for half an hour in the stove at a temperature of 150° C., being 50° C. above boiling point. Dr. Auvard finds that a high temperature blunts the knives. Strong antiseptic solutions alone avail for India-rubber and glass tubes. Obstetric and gynecological cases made of leather should not be constructed so that the instruments are fixed in straps against the leather. The instruments should be rolled up in a calico or longcloth sheet, which must be washed at least once a fortnight.—*Brit. Med. Journal.*

IDENTITY OF HUMAN AND ANIMAL DIPHTHERIA.—In support of this proposition, M. DELTHIL points out that diphtheria may be met with in many different animals with symptoms almost identical. The bacillus of the disease in man, when inoculated on animals, multiplies with rapidity; and the disease itself may be retransmitted to man with its original characters. From these facts, and from the history of the disease, M. Delthil concludes it is identical in man and animals. He records thirteen personal observations, and cites in addition several facts noted by different observers, all of which go to show that the transmission of diphtheria from animals, and especially from birds, to man has taken place under circumstances often diverse and little thought of. In conclusion, he urges that if the identity and transmissibility of human and animal diphtheria are admitted, it follows that stables, poultry-yards, dovecots, etc., are very likely to contain the germs of the disease, and to favor in consequence its spread. He therefore urges the necessity for a thorough and constant inspection of all markets, poultry-yards, and dwellings where domestic animals and fowls may be kept, and he points out that the initiative in this respect has already been taken in Germany, Italy and Switzerland.—*The Lancet.*

THE USE OF BROMOFORM.—In the *Medical Record* for September 6, 1890, DR. LOUIS FISCHER reports sixteen cases of children treated in the German Polyclinic of New York, the majority of whom were, as a rule, poorly nourished subjects, living in tenements in badly ventilated rooms, and in all respects under the least favorable conditions of hygiene. In all of these cases, nevertheless, the most marked improvement and rapid cure is said to have followed the use of bromoform. The doses which he administered were the following:

For children under and up to 1 year of age, 2 to 3 drops three times a day. Children from 2 to 4 years of age, 3 to 4 drops three or four times a day, depending upon the severity of the case. Children up to 8 years of age, 4 to 6 drops three or four times a day. The doses were usually increased on the third day, and in very severe cases on the second, by adding 1 drop to a single dose. The time required for a cure was variable, in some cases ten days being enough to effect a cure, while others required almost four weeks.

This remedy may be given in a small teaspoonful of water; but as, from its weight, it sinks to the bottom of the spoon, care must be taken to see that the child swallows the bromoform and that it does not remain in the spoon. As a rule, no difficulty will be experienced in giving it to children, as bromoform has a pleasant taste and is readily taken. If the bromoform turns brown, it contains free bromine, and should then not be administered.—*Therapeutic Gazette.*

STRYCHNINE AS AN ANTITETANIC VACCINE.—DR. PEYRAUD (*Bull. de l'Acad. de Médecine*, No. 40, Oct. 7, 1890) gives an account of some experiments carried out with soil taken from a covered in enclosure in which wine was stored, and in which no horses had entered within the memory of the inhabitants, and which had not in any way been cultivated since the store was erected. Dust from forage when inoculated induces tetanus in 50 per cent. of the animals experimented on, but soil taken from this wine store induced tetanus in 100 per cent., five out of every six of the animals inoculated dying. Having obtained this virulent material, Dr. Peyraud carried out a series of experiments to test his theory that strychnine, which produces many of the symptoms of tetanus, would probably act as a vaccine; he, therefore, injected 0.5 milligram of strychnine in solution every day for five days. Ten rabbits so vaccinated and four test rabbits were inoculated with a small portion of tissue from near the wound in an animal in which tetanus had been produced experimentally, and the wounds were carefully closed. Of the fourteen animals the four test rabbits, and three of those vaccinated, died. In a second series of experiments, seven prepared rabbits and fourteen test rabbits were inoculated with tetanic virus six days after the strychnine inoculation had been stopped; thirteen of the test animals and four of the prepared animals died.

MM. Verneuil, Trasbot and Nocard were appointed as a committee to test the accuracy of such an important statement, but unfortunately, they were unable to obtain as good results as Dr.

Peyraud had recorded. They found that the soil was undoubtedly capable of producing tetanus in a certain proportion of rabbits, but in their hands this proportion was only 11 per cent., whilst as regards preventive inoculation, 0.6 of a milligram of sulphate of strychnine injected daily for five days did not protect a single one of eight rabbits against the action of a pure cultivation of the bacillus of tetanus. They were killed as rapidly and with the same symptoms as eight test rabbits. All died in from three to five days. Thinking that the dose of strychnine might be too small, they gave to ten rabbits 1 milligram of sulphate of strychnine; one of the animals died. The next day they injected 0.9 of a milligram, and another of the animals died; the third day, 0.8 of a milligram, and only two or three of the animals showed symptoms of strychnine poisoning. On the fourth and fifth days the same dose was administered to the remaining eight rabbits. On the sixth day, the eight prepared rabbits and four test rabbits received 10 drops of a pure culture of the bacillus of tetanus, with the result that the whole twelve were dead at the end of five days, and the reporters conclude that, although an important fact has been demonstrated by M. Peyraud as regards the presence of the tetanus bacillus in non-cultivated and undisturbed soil, his experiments on preventive inoculation with strychnine against tetanus are vitiated by some important fallacy, as the committee were unable to obtain the same results.—*Brit. Med. Journal.*

RECENT HYPNOTICS.—DR. H. DEHIO (*Petersburg med. Wochenschr.*, No. 33, 1890), gives the result of trials of various hypnotics in the Dorpat Clinic for Nervous and Mental Diseases. Hypnone in doses of 10 to 15 drops was useless, and methylal and chloralamide were found of little use in the few cases in which they were tried. Paraldehyde was and remains the most reliable hypnotic used in the clinic. In severe cases a dose of 5 to 6 grams was followed by another of 3 to 4 grams; this was found sufficient to give a night's rest. As a rule the drug acted well, but sometimes only slight sleep followed, and in other cases tolerance was soon established. But these occasional disadvantages are counterbalanced by the fact that the drug, even in large doses, does not influence the heart or respiration. Paraldehyde may upset the digestion, causing diarrhœa. The medicine must be pure, it must not redden litmus paper. If kept exposed to daylight or in badly-stoppered bottles it soon becomes acid. After the prolonged use of paraldehyde the following symptoms may appear: loss of appetite, gray coloration of the face, dryness of the skin, and loss of body weight; at the same time the drug does not produce somnolence. These symptoms disappear on discontinuance of the drug. Paraldehyde, however, is the sheet anchor in the Dorpat Nerve Clinic. Amylene hydrate was also found of use, and has the advantage of not affecting the digestive tract, although it may produce headache and depression. Urethan is of service in doses of 45 to 90 grains in mild cases of insomnia. Sulphonal was given in doses of 15 to 60 grains. It was not found so useful as paraldehyde and amylene hydrate. Drowsiness, weakness, and incoördination of gait were noticed after its administration. In mania it acts only slightly, also in progressive paralysis. In many cases of excessive motor disturbance, such as occurs in mania and delirium tremens, all these hypnotics are practically useless. Hydrochlorate of hyoscine ($\frac{1}{75}$ of a grain) is the best remedy in these conditions.—*British Medical Journal.*

INTRA-UTERINE TYPHOID INFECTION.—P. ERNST (*Ziegler's Beitrage*) describes an interesting case of intra-uterine infection. The child, a premature birth from a mother infected with typhoid fever, died on the fourth day after birth, death being preceded by a fine reddish irruption, on the lower extremities and abdomen. The post-mortem examination showed injection of the stomach, enlarged spleen and icterus. Cultures were made from the blood and spleen that developed colonies of typhoid bacilli. Microscopic examination of the spleen showed masses of bacteria plugging the small capillaries in the Malpighian bodies. The peculiar situation of these bacilli showed that a large number of germs had passed into the circulation of the child at one time. This, the author thought, was explained by a trauma sustained by the mother a few days before the birth, in which a considerably quantity of blood had been discharged by the vagina. This injury to the placenta furnished the opportunity for fœtal infection. Unfortunately, a satisfactory examination of the placenta and liver of the child could not be made.

A NEW METHOD OF EXAMINING THE LIVER.—A new method of examining the liver, more especially its lower border, is proposed by GLENARD (*Weekly Medical Review*, August 2, 1890). The patient lies on his back, while the physician, sitting to his right, on the edge of the bed, passes the four fingers of his left hand under the right hypochondrium of the patient, so as to press out the lumbar region, while the thumb, applied more anteriorly, makes gliding motions from below upward. If the patient now makes deep inspirations, the thumb will distinctly feel the lower margin of the liver.

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ONE ASPECT OF THE RELATION WHICH PATHOLOGY BEARS TO THERAPEUTICS.

The best part of modern medicine is undoubtedly founded upon a pathological basis, *i. e.*, on the changes in tissues which we can discover by an examination of their gross or minute structures, such changes for the most part being either quantitative or qualitative, physical or chemical. Unfortunately for the human organism, the power of regenerating damaged or changed structures is not inherent in it to any considerable degree.

Certain of the lower animals are capable of reproducing limbs or even organs which have been experimentally or accidentally removed. The lobster can reconstruct a complete and perfect claw, or the tadpole a new tail, and further illustrations of this reconstructive capacity are perfectly familiar to the biologist. In man, however, regeneration is usually limited, with few exceptions, to that important though less highly organized group known as the connective tissues. That a liver cell, for instance, or any other parenchymatous or functional cell, was ever reproduced to effect repair in human tissues, is a controverted point, but the weight of evidence seems to be that such regeneration does not take place. This is in accord with a supposed law that the more highly organized or specialized a tissue becomes, the further is it removed from that reproductive function which it primitively possessed, and hence the less is it capable of cell generation or regeneration.

Most of us, if allowed a moment's reflection, will accord the bulk of our success in treatment of disease to that oft cited something, the *vis medicatrix naturæ*, which, if we are reasonable, we have endeavored to aid by the intelligent use of dietetic, hygienic and therapeutic measures. But what is to be done when the *vis* is wanting? Now, since it has been seen that Nature is incapable of reproducing any of that class of highly organized cells to fill the place of those irreparably damaged by disease, then certainly our whole field of successful therapeutics lies anterior to much that is called pathological. Pathology, in other words, too often dealing with tissues that have advanced beyond the hope of repair. And the task here imposed would be too great for therapeutics in its present state of advancement. But pathology has created a high ideal for it to struggle toward.

Disturbance in function is usually our first guide, and furnishes those indications which we treat; fortunately, also, this first evidence of disease precedes structural change, then by following the clue Nature, or Nature and art, succeed in bringing the process that has gone astray back to the performance of its duties physiologically. We shall suffer much disappointment if we think to restore that which we call pathological, for tissues and their cells, when in this state, have often lost their function. We must then encounter a most difficult problem, *i. e.*, that of establishing a lost function. Art is better able to augment where there is a deficiency or reduce where there is an excess, and even bring back to a physiological standard where there is perversion, than to restore what is lost; Nature, too, even failing here at times.

Pathology makes no compromises with therapeutics. As a fundamental branch of the medical sciences, pathology has been conscious of its own importance from the beginning, and has not been backward in laying down laws or imposing new tasks upon its more ancient though less stable colleague. In this nineteenth century, therapeutics has a leader which it must struggle to obey, but no matter if it does fall short, it need be held in no contempt; a feeling too often engendered at the present day in the mind of the student who has thoroughly imbibed the pathological spirit of the age, especially if he has come under the influence of the German school.

When the medical world gets a great truth, it

often loses much of value when it drops the old in its efforts to seize the new. But in time there is a reappraisement, and the old and new are placed relatively where they belong. Let not, therefore, modern pathology give rise to therapeutic skepticism, but rather render more effective our efforts to deal with disease.

ETHER INTOXICATION.

MR. ERNEST HART, the distinguished editor of the *British Medical Journal*, recently gave an address before the Society for the Study and Cure of Inebriety on this topic.

It has been known for several years, that ether was used for purposes of intoxication in some of the northern counties of Ireland. DR. RICHARDSON, of London, and others called attention to this fact and showed that it was increasing. This address of Mr. Hart's groups many of the facts, and presents a most startling picture of this new intoxicant. It appears that somewhere about 1842, ether was sold freely, and used as a beverage in County Derry, Ireland. In 1860 and 1870 it had spread to many of the adjacent towns and counties, and became notorious. It was sold openly by the glass and in larger quantities, and seems to have been used by the poor people, because it was a cheap form of intoxicant.

The Catholic clergy were the first to denounce the practice, but the fear of eternal damnation was not strong enough to suppress it. The demand continued as before, only the use was more secret and less open. Both Protestant and Catholic clergy petitioned parliament to regulate this ether traffic, and also the magistrates called attention to the evils following its use; but practically nothing has been done. Cookstown, Draperstown, and Maghira seem to be great centers in which ether is sold for a beverage. At Cookstown over two tons of methylated ether were sold last year. From Belfast and Londonderry, equally large quantities were shipped to various towns and villages in these northern counties. Each year the traffic is becoming more and more concealed. Several large London ether manufacturers, and also Edinburgh firms, have been making increasing quantities of methylated ether for this demand. This is obtained by removing nearly all the methyl products from methylated spirits, leaving a cheaper ether; this is one of the ethers prepared from rectified spirits, and is sold at wholesale at one-seventh the cost of medicinal ether on the market. It is believed that the breaking up of illicit stills in these counties gave a great impetus to ether drinking, which was cheaper than any other intoxicant that could be obtained.

The peculiar fascination which follows the use of this drug, is the rapid pleasing exhilaration and excitement which comes on a few moments after it is used. This is followed by mental confusion and stupor which wears off as quickly as it came on. At first no particular depressing after effects follow, and the man can become intoxicated and sober half a dozen times a day, at a cost of not more than one or two cents for each two or three drachms. Most of the habitués take two or three drachms three or four times daily, followed by water to cool the mouth and throat. Formerly it was only the poor people of the villages and country who used it, now it has extended to all classes, and is used entirely for its effects. After a time the stomach and brain become affected, and complex forms of gastritis and dyspepsia appear. The brain suffers very profoundly, mania and melancholy are very common. Organic heart disease is also prevalent. Several cases of death have been noted of persons who, while exhaling large quantities of spirits, lit a match and accidentally set fire to the vapors of the breath causing instant death. Generally the effects are much the same as that which follows from alcohol, only more rapid in its interference with the nutrition, and damage to the nerve structure and glandular system.

Its use can not be concealed, as so much of it is exhaled, and a person who has used it is quickly detected by the odor of his breath. Dr. Hart thinks that the use of ether as a beverage is growing in other sections of the country. In Lincolnshire and in London there is clear evidence that ether inebriety has become established. But for some unknown reason it is concealed, both the seller and user are very secretive and do not make any publicity of their infatuation. Mr. Hart suggests that the sale of ether should be regulated the same as any poisons, and that legislatures should take action at once before the evil has reached such proportions as to make it almost impossible to reach it. DR. KERR, Presi-

dent of the Society for the Cure of Inebriety, in an interview on this subject remarked:

People of England have no conception of the terrible hold which this passion for ether-drinking has taken upon men and women in the North of Ireland. A person walking through the crowded and narrow streets of some of the villages there notices the fumes of this drug, with which houses and population seem to be saturated. The market places, the railway carriages, even the churches, reek with its penetrating odor, and one goes away with the sad but true impression that many of the people have become victims to a habit as deadly in its effects as it is new in the history of human weaknesses. . . . . How many tons of the drug are swallowed by the population of the counties Derry, Tyrone, and Armagh, where the habit is spreading with alarming rapidity, it is impossible to say, for want of accurate information. The amount, however, must be enormous.

Why these people use ether is for the same reason the world over:

Because they are suffering from a disease just as real as consumption or cancer, although not so recognized. I mean, the disease of inebriety, of which the craving for ether in the North of Ireland is one form, just like the craving for alcohol, or morphine, or chloroform, or opium, or cocaine, which, by the way, is the latest thing in the way of hypodermic injections among the fashionable people of London.

Speaking of this form of inebriety he says:

An ounce of ether is enough for a single drink, and costs, after allowing a retailer 100 per cent. profit, only a penny. So you see, for a sixpence a man and his wife can pay all the expenses of a very comfortable spree. Yes, the stuff is sold openly in all the dramshops and groceries, and, to my mind, the only wonder is, given the superior cheapness of ether over alcohol and its thoroughly satisfactory qualities as a drink-producing agent, that the habit of ether drinking has not spread over the whole of Ireland, and, indeed, invaded England and the rest of the world.

It has been claimed that Father Mathew was the cause of the present state of things, inasmuch as he, by his preaching, persuaded the people in Draperstown, in the South of Derry, to renounce all forms of alcoholic drink. This they did, but, having discovered accidentally that ether would answer their purpose quite as well as alcohol, they substituted the former for the latter, and, in spite of Father Mathew's eloquence and well-meaning efforts, Draperstown has continued in a chronic state of drunkenness, although of another kind. Although the people in these districts are consuming enormous quantities of ether every year, the amount of alcoholic drinks sold there has not decreased.

The English papers have taken up this subject, and the government will undoubtedly order an inquiry into the extent and nature of this evil.

In this country a number of isolated cases have been observed, and some writers on inebriety have warned physicians against presenting forms of ether as narcotics, especially in alcoholic or opium cases. There is evidently danger in this direction in certain cases, and the outcome of this new form of intoxicant and the efforts to suppress it will be watched with increasing interest in this country.

EDITORIAL NOTES.

ACCIDENTAL DEATH OF A PHYSICIAN FROM CHLOROFORM.—Dr. Justus E. Gregory, a well-known physician of Brooklyn, was killed on October 25, by an overdose of chloroform. He had been accustomed to inhale this anæsthetic for the relief of facial neuralgia. On the evening of his death he inhaled a dose of twenty drops on a handkerchief, he felt some relief but called for another dose, and five minutes later was found dead. Dr. Gregory was 49 years of age. He had been a surgeon in the army during the war of the rebellion.

A CRISIS IN BACTERIOLOGY.—Prof. Koch has not abandoned his "momentous investigation," as *The Lancet* calls it, at the Charity Hospital at Berlin; eight patients in Prof. Senator's wards of that hospital being stated to be the number of consumptives that are now under the mysterious Koch treatment. The intimation has been published that in at least two of these patients there have been manifest signs of improvement. The eminent Prof. Leyden, supposed to be the only one of Koch's colleagues who is entirely conversant with the new treatment, has expressed himself most hopefully of the ultimate success of the discovery. It is further intimated that no further disclosure of the treatment will be made until about the middle of December, at which time Koch will have proceeded far enough with his experiments to cast aside the veil of secrecy which is imposed on all, both patients and their attendants, who have participated in them. The letters and telegrams that have been sent to Koch since the adjournment of the Congress are several hundreds in number, and they all remain unanswered pending this investigation upon the patients at La Charité. It can readily be inferred that the continued reticence of Koch has been the wise and proper course, in view of the damage that might have resulted from an immature disclosure, more especially if he has been him-

self misled. Where so much is at stake the cautious and truly scientific attitude of the great bacteriologist commends itself to all men of science. "We may be," says *The Lancet*, "on the verge of a revolution in therapeutics, and bacteriology itself is on its trial in this momentous investigation." The subjugation of the rebellious bacillus of tubercle almost of necessity carries with it the downfall of other disease germs having a less vitality or resisting power.

JEFFERSON MEDICAL COLLEGE.—A serious episode in the history of this college has arisen in the middle of its busiest season. On October 27, if we are correctly advised, the Trustees voted to vacate the chair held by Prof. Bartholow, that of Therapeutics and Materia Medica, basing their action on the ground that the veteran professor is no longer mentally capable of holding the position. Dr. Bartholow proposes to oppose this action, saying that he is as competent, both physically and mentally, to perform the duties of his chair as ever he was, and that the students attending his lectures this year have expressed no dissatisfaction with his instructions. In fact, if the press despatches are correct, his class of students appears to have taken sides with him, and many of them have declared that they will withdraw from the college if a substitute lecturer shall be appointed by the Trustees. Already have numerous possible candidates for the professorship been named, inclusive of Drs. H. Morris, S. Solis-Cohen, T. J. Mays and J. C. Wilson, all of Philadelphia, and S. O. L. Potter, of San Francisco.

JOHNS HOPKINS HOSPITAL COURSE OF POST-GRADUATE INSTRUCTION.—During the coming year, a course of practical instruction to medical graduates will be arranged by the faculty of the Johns Hopkins Hospital, taking up especially the subjects of medicine, surgery, gynecology and obstetrics.

CAN INEBRIATES BE CURED?—The *British Medical Journal* says: We have been accustomed to hear from the Committee on Legislation for Inebriates, the Society for the Study and Cure of Inebriety, and other disinterested associations, that inebriety is curable to a considerable extent. According to certain Austrian wiseacres, we have been the victims of a vain if pleasing delusion, and our encouraging reports have been but brilliant romances. The Permanent Committee of the Lower Austrian Diet have had under consideration a proposition to establish curative retreats for inebriates. Upon this project the Austrian Sanitary Board has opened a furious bombardment. In a recent report they declare that they cannot recommend the establishment of asylums for drunkards, and the enactment of a law authorizing enforced detention in such institutions. The reason they allege for this remarkable opposition to a highly laudable piece of legislation, is that "it is very questionable whether alcoholism can be cured at all." It is puzzling to conjecture on what authority or experience such a statement could have been made. The records of such homes, where the patients are treated as persons laboring under a disease, both in America and England, show that at least one-third of all the cases, whose after-history has been ascertained, have done well. This is a substantial measure of success, especially when the period of addiction prior to reception into a home is taken into account. That average period preceding treatment has been in the Dalrymple Home eight and one-half years. The Austrian Sanitary Board, apparently as an after-thought, add that in any case the probability of cure is too small to warrant special legislation or heavy expenditure. We have little doubt that this extraordinary attack upon so useful a proposal will stimulate independent inquiry into the results of such special treatment and legislation. The encouraging success thus far obtained elsewhere cannot fail when made known effectually to triumph over the present temporary, if powerful, opposition.

A MOHAMMEDAN FEMALE PHYSICIAN.—Dr. Razie Koutlairoft-Hanum, a young Mohammedan woman, who was born in the Crimea, recently passed a creditable examination as physician and surgeon at Odessa, and now enjoys the distinction of being the first woman of her creed to engage in the practice of medicine as understood by western nations.

THE DIDACTIC LECTURE MUST GO.—The medical college course has been lengthened to three years in almost every reputable college, and now, says the *Indiana Medical Journal*, it is time to take the next step in progress and abolish the didactic lecture. This is the view which the *Record* has advocated, and it is one which must in time be adopted.—*Medical Record.*

TOPICS OF THE WEEK.

MEDICINE AMONG THE MONGOLS.

In Mongolia, the practice of medicine rests chiefly with the priests or Buddhist lamas, whose system is quite elaborate, but based for the most part on superstition. Instead of paying occasional visits to a patient, their method is to reside in his house until recovery or death takes place, or the case is decided to be incurable. The people have great confidence in drugs and medical regimen, including the water-cure, the latter object causing them to resort to springs, both hot and cold, that are somewhat abundant in Mongolia and Northern China. They place implicit confidence in the medical knowledge of the foreign missionaries who visit their inhospitable country, but express wonder and astonishment when their proffered recompense is refused by the latter. A very frequent affection among the Mongols is the itch, due in large degree to their repugnance to the washing of either their persons or garments. In their tents they live so closely together that if one of them gets the itch all soon have it. Various other skin diseases are prevalent among them. Rheumatism is of frequent occurrence, and the remedy largely used for that trouble consists of kneading or a kind of massage; they make use of a "rheumatism stick," a piece of wood so bent that any part of the body can be reached by the patients in their self-application of the kneading process. A peculiar disease, called Narry, due to their indulgence in their native spirituous liquor, is frequent; the stomach becoming intolerant of food so that the patient ultimately dies of starvation. For the bite of a dog they apply to the wound a portion of the fur of the animal; literally "the hair of the dog" is their remedy. They use the loadstone in powdered form as a cure for ulcers, deafness, etc. They attribute many diseases to the influence of the planets and constellations, to offenses committed, and to fate. Hygiene or preventive measures do not enter much into their scheme of treatment.—*Press and Circular*, October 15.

DRAM DRINKING DOCTORS.

The last number of the *Journal of Inebriety* has the following:

"From a long letter written by an eminent medical man, we condense the following: I was greatly shocked at the number of persons intoxicated at the banquet given to the International Medical Congress at Berlin. My surprise was increased to note that many of them were eminent German and French teachers of medicine. I had supposed medical men, accustomed to use wine and beer daily, were less likely to be intoxicated than the partial abstinent American or Englishman, who naturally are more easily affected by large quantities of wine. At the banquet given to the congress at London, a small number of medical men were stupidly intoxicated, and at Washington the number was still less. As far as could be observed those cases were mostly persons not well known. At Berlin it was the opposite; many very prominent men and leaders were offensively hilarious or stupid. The drinking seemed to be of a reckless, impulsive character, which is only seen in low life in this country. At London and Washington, men who were notedly excessive users of spirits drank with reserve and caution, and gave no evidence of intoxication, but at Berlin it was the contrary. The doctor concludes, that the moderate beer and wine drinker has far less power of control, and is far more likely to be delirious or stupid from excess of spirits, than the self-reliant occasional drinker in America or England. He believes that the American physicians are the most temperate in the world, and exhibit more pride of character and personal respect at banquets where there is a general unbending of social restraints.

"To this we would add, that in our opinion it is always a sad reflection on the manhood of the medical man, who after a protracted study abroad, brings home with him foreign customs of moderate use of wine and spirits. It implies a degree of ignorance and parrot-like imitation that becomes more and more apparent every year. The physician, of all others, should be the last one to use spirits in moderation or excess. The use of alcohol as a beverage is direct evidence of ignorance of the teachings of modern science and failure to keep up with the growth of medical advance. We believe no facts are sustained by stronger evidence than these."

STAGNATION OF POPULATION IN FRANCE.

The so-called depopulation of France, which really only signifies the fact that the French population has in nine years increased so slowly as to have become almost stationary, is a subject of much interest from a statistical as well as a political point of view. An official notice has, within the last few days, been issued in Paris giving a summary of the vital statistics of France for 1889. The actual number of births registered in France, without regard to population, have steadily declined from 937,944 in 1883, to 880,000 in 1889; the birth-rate per 1,000 having declined in the same period from 24.8 to 23.0. Compared with the other European birth-rates, this low birth-rate in France stands out in striking contrast; the rate is 37.0 in the German Empire, 38 in the Austrian Empire, 37 in Italy, and 44 in Hungary. The excess of births over deaths in France last year was but 86,000; indeed, if the deaths had not shown a remarkable decline, the excess of births over deaths would have been very much smaller. The deaths recorded in France last year were 794,000, and were considerably fewer than in any year since 1874; the death-rate, which had averaged 22.1 in the preceding five years, declined last year to 20.7, but exceeded the death-rate in England and Wales by no less than 2.8 per 1,000. The marriage-rate in France, that is the proportion of persons married, was 14.2 per 1,000 last year, a lower rate than in any year since 1870, when the recorded rate was distinctly abnormal, owing to the German invasion and occupation. It is a noticeable fact that the recorded marriage-rate in France is now scarcely lower than the rate in England and Wales, although the birth-rate in the two countries is so widely divergent. Indeed, so different is the age constitution of the French population to that of the

English population, that the French marriage-rate, calculated upon persons of marriageable ages, actually exceeds the English marriage-rate calculated in the same manner. The low birth-rate in France, compared with that in England, is therefore entirely due to the smaller proportion of births to each marriage, although it is also a fact that the marriage-rate in France has steadily declined in recent years, as has been the case in most other European countries, including England and Wales.—*British Medical Journal.*

ALCOHOLIC CIRRHOSIS IN A CHILD.

Dr. H. M. Biggs has recently presented before the New York Pathological Society a specimen of advanced cirrhosis of the liver, obtained by him at the autopsy of a boy aged only 13 years, whose body also presented all the other usual lesions of chronic alcoholism. It was reported to Dr. Biggs that when the deceased was a baby of 2 years old, he had a bronchitis for which whisky was prescribed. As the child seemed to take a liking to the latter, his parents permitted him to gratify his taste for it, without let or hindrance, and during recent years they had given him money to spend for alcoholic drink. His capacity for disposing of alcohol became so increased that he would take from six to eight drinks of whisky each day, of about 1½ oz. to each beverage. On the day of his death he bought a larger quantity than usual and took it all at one drink. He was found semi-comatose, some hours later, and never rallied. At the post-mortem examination the liver and other organs presented nearly the same pathological appearances that mark alcoholic saturation in the adult.

REMOVAL OF MICRO-ORGANISMS FROM WATER.

Dr. Kruger, considering the fact that more bacteria are usually present in rivers than in lakes, notwithstanding that lakes themselves in many cases are more or less polluted by rivers passing through populous towns, believes that this rapid decrease in the number of organisms may very possibly be due in part to the action of direct sunlight, but in the main to the tendency of water in a comparatively undisturbed state to deposit and precipitate. He therefore carried out a number of experiments with a view to determine how far the removal of organisms was brought about by the mere mechanical deposition of inert matter and also by precipitation as a result of chemical action. The mechanical precipitants employed, all in a state of fine powder and sterilized, were alumina, brick dust, clay, chalk, sand, coke, and charcoal. Water obtained from an ordinary service-pipe was impregnated with a liquid containing a bacillus growth of a species incident to tap-water. This was divided into two portions—one for precipitation with the inert substance, and the other was untreated for the sake of comparison. Experiments were similarly carried out in which precipitation was obtained as a result of chemical action such as is brought about by the addition to the water, containing naturally lime, magnesia, etc., substances like wood ash, sulphate of alumina, and slaked lime. The general conclusion come to by the author from the results obtained is that undoubtedly large numbers of bacteria are carried down by inert substances merely sinking in the water, but that the action is very considerably increased when, in addition to mechanical deposition, a chemical precipitation also takes place. The corollary is evident—inert substances do mechanically assist in the precipitation of microörganisms, but preference should be given to chemical treatment.—*Druggists' Circular.*

STERILIZED MILK.

So-called "sterilized milk" by no means always deserves its name, in some cases being much fuller of germs than ordinary unboiled milk fresh from the cow. Herr Kohlmann, of Leipsic, on subjecting two specimens of milk sold as sterilized to examination, found that one of them really was so, no germs being discoverable; while the other specimen contained 350,000 germs per cubic centimetre. For the purpose of comparison other examinations were made, and it was found that a sample of fresh milk bought in the street contained about 160,000 germs per cubic centimetre—that is to say, less than half the number in the second sample of so-called sterilized milk. Milk boiled in the kitchen contained 158 germs per cubic centimetre; distilled water kept in an open vessel, 430; waterworks water, 1,064; and water from the Hofbrunnen, 12,000. Herr Kohlmann suggests that the failure of whatever process was used to sterilize the milk may have been due either to water having been mixed with the milk before the process was commenced, or perhaps to too long a time having been allowed to elapse between milking and sterilizing. This last point exercises a very great effect, as is shown by Freudenreich's observations. He found that milk which when received contained only 9,300 germs to the cubic centimetre, after being kept for three hours at 60° F. contained 10,000; after six hours, 250,000; and after twenty-four hours, no less than 5,700,000. It would therefore appear that our knowledge of the conditions under which milk may be readily sterilized is at present somewhat insufficient, and that reports of the results of the feeding of infants with milk which is reputed to be sterilized must always be received with a good deal of skepticism unless specimens of the milk have been frequently examined by a competent person.—*The Lancet.*

DISINFECTION AFTER DIPHTHERIA.

The Conseil d'Hygiène Publique et de Salubrité for the Seine Department passed the following resolution on a report presented by Dr. Dujardin-Beaumetz on September 19: In cases of diphtheria the patient's dwelling should be disinfected free of cost by men belonging to the "disinfecting brigade;" their services can be obtained on application to the Prefect of Police. All things which have been in contact with the patient must be baked in the steam ovens provided by the municipal authorities. For the disinfection of rooms, sulphur (60 grams for each cubic metre of space) should be used, and the floors and every part of the room which can be washed should be cleansed with 1 in 1,000 sublimate solution. The room should be occupied only after it has been carefully dried and thoroughly ventilated.

PRACTICAL NOTES.

CAFFEINE IN PNEUMONIA.

Te Gempt claims that the use of caffeine is indicated in the course of acute fibrinous pneumonia when the heart begins to be enfeebled, the blood pressure of the aortic system lowered, or when the pulse becomes unusually frequent or irregular. The use of the drug should be begun before symptoms of collapse appear. It should be used at the beginning of the disease in debilitated persons, drinkers, old people, and in subjects of cardiac disease. When used at the proper time and in sufficient doses it diminishes the frequency of the pulse and of the respiration, and increases arterial pressure, lowers temperature, and produces a sensation of well-being. After the period of apyrexia it is unnecessary to continue its administration.—*Revue des Sci. Méd.*, January, 1889; *Western Med. Reporter.*

CHRYSOPHANIC ACID IN ACNE.

Dr. Metcalf highly recommends this agent in acne. He says he has not failed to cure perfectly any case in which the treatment has been adopted. The face is to be washed with soap and well dried, at night. Before retiring, the parts in which the acne is, are to be well rubbed with an ointment of 3 grains of the acid to the ounce of vaseline, and this is repeated nightly until a sharp inflammation of the skin ensues. The inunction is then omitted till the dermatitis is gone, when it is repeated. In most cases a 3-grain ointment is of sufficient strength, but occasionally the strength is to be increased up to 5 grains to the ounce, or even more. The patients are to be cautioned about the staining of their fingers and clothes and to guard their eyes.—*Can. Lancet.*

ADMINISTRATION OF CHLORALAMID.

Much depends upon the proper administration of the new hypnotic, chloralamid, to obtain the full effect and satisfactory and beneficial results. The dose is from 15 to 60 grains, with an average dose of 30 grains. Chloralamid is soluble in about 20 parts of cold water, and in 1½ parts of alcohol.

An additional caution is necessary: Never dissolve or dispense chloralamid in hot water or warm solutions, as the heated preparation decomposes.

The best modes of administration are:

1. In a teaspoonful of whiskey or brandy.
2. In properly proportioned solutions with wine, spirits, or spirituous compounds.
3. In a small cup of cold water or cold tea.
4. In powder form, in wafers or cachets washed down with cold water.

The following formulas have come well recommended and bear the stamp of general approval and adoption:

Dr. W. Hale White (*British Medical Journal*) says: "I always prescribe it with spirit; 20 grains will dissolve in 1 drachm of rectified spirit in fifteen minutes, and water may be added to this solution without reprecipitating the drug. A good way of giving it is to tell the patient to dissolve it in a little brandy, add water to his liking, and drink it shortly before going to bed."

From an editorial in the *Medical Summary*, Philadelphia, we quote:

℞. Chloralamid, 4 drachms.
Spts. vini gallici, 4 ounces.
Curaçao, 4 ounces.
℥. A teaspoonful (15 grains chloralamid) in water and repeated in four hours if necessary.

Dr. John Aulde suggests:

℞. Chloralamid, 4 drachms.
Spts. frumenti, 3 ounces.
Elix. aurantii, sufficient to make 4 ounces.
℥. Take one tablespoonful (30 grains chloralamid) in water.

Another popular prescription, extensively used in New York is this:

℞. Chloralamid, 4 drachms.
Tinct. cardamom. comp., 2 ounces.
Elixir simplex 2 ounces.
℥. Take a teaspoonful as a dose.

This further suggestion is taken from the *Medical News:* Schmidt employs chloralamid hypodermically, the solution used being 13 grains of chloralamid dissolved in 5 drams of distilled water. Sixteen minims of this subcutaneously is usually a sufficient dose, and acts more rapidly than larger doses given by the mouth.—*Notes on New Remedies.*

INFANTILE CONVULSIONS.

Dr. Jacobi first orders a purgative dose of calomel and then follows in a few hours by:

℞. Chloral hydrat., gr. iv.
Potas. bromid., gr. viij.
Aquæ, } āā f ʒ j.
Syrupi, }
Sig. One dose for a child 2 years old.

VOMITING OF PREGNANCY.

℞. Cerii oxalat., gr. j.
Ipecacuanhæ, gr. j.
Creasoti, gtt. ij. ℳ.
Sig. This is to be taken every hour until nausea is controlled.

—Prof. Goodell, Philadelphia.

AN OINTMENT FOR CHAPPED HANDS

is recommended in the *Provincial Med. Journal*, consisting of menthol, 15 gr.; salol, 30 gr.; olive oil, ½ drachm; and lanolin, 1½ oz. It is said to alleviate the pain on the first application.

SOCIETY PROCEEDINGS.

Tri-State Medical Association.

Second Annual Meeting, held in Chattanooga, Tennessee, October 14, 15, and 16, 1890.

(*Concluded from page 695.*)

SECOND DAY—MORNING SESSION.

The Association was called to order by the President at 9 A.M.

The first paper read was by DR. J. C. SHEPARD, of Winchester, Tennessee, entitled

A FEW REMARKS ON THE FEVERS OF MIDDLE TENNESSEE AND THEIR TREATMENT.

He said the great malarial period extended from the settlement of the country up to about 1840, during which all the fevers of the country were malarial and periodical. Commencing about 1840, the great typhoid period extended until near 1860. During this period malarial fevers were almost, if not entirely, unknown, and typhoid was dominant everywhere and every case was typical. About 1860, or a little sooner, there was a return of malarial fever, but in connection with typhoid fever. This was the typho-malarial period, which continued for fifteen or twenty years.

About 1880, or somewhat earlier, the characteristic symptoms of both typhoid and malarial fever commenced to disappear and have continued until now. This is the period of fusion. We now have only one fever, which is a continued fever, not typically typhoid, nor malarial, nor even typically typho-malarial. There is not now, nor never was, a continued malarial fever, *per se*, in Middle Tennessee, said the speaker.

Of treatment but little is to be said. Cold water baths Dr. Shepard considers impracticable. New antipyretics should be given with caution. He believed that there was entirely too much quinine used in the continued fevers of Middle Tennessee. Physicians could not afford to dispense with alcoholics yet.

DR. L. P. BARBER, of Tracy City, Tennessee, followed with a paper entitled

A CONTRIBUTION TO THE STUDY OF THE CONTINUED FEVERS OF THE SOUTH,

in which he said the continued fevers of the South, their nosology and etiology, form a subject now justly attracting much attention, a subject upon which much is yet to be learned, and over which the medical world is considerably at variance. Only a close and accurate study of the disease by competent observers, in many and different localities, and a thoughtful comparison of these observations with free discussion will advance our knowledge of their nature, and shed light on the vexed question of its cause.

From the first days of his practice, this disease, so common to all parts of Tennessee and its adjoining States, had proved of great interest to him. Encouraged by the recent vigorous inquiry and research in this direction, he began some fifteen months since to keep a record of all fevers that occurred in his private practice, and the comparison of the cases, irrespective of their different designations, had helped him toward a decision as to the nosology of continued fever.

Dr. Barber then reported a large number of interesting cases, after which the two papers were discussed conjointly.

DR. G. W. DRAKE, of Chattanooga, in opening the discussion, said that the human body is an aggregation of tissue cells, and that there are found among these cells, in various localities or tissues, certain loose cells, migratory, amœboid, which he would call the police force intended to protect the tissues against the invasion of foreigners. When the foreigner which produces typhoid fever attacks Peyer's patches and the solitary glands, the migratory cells from all adjacent parts, and possibly distant, rush to the conflict. The result is great destruction of life of both microbes and phagocytes, and their putrefying remains produced typhotoxin and probably other alkaloids. He believed typhoid fever to be produced by a germ once external to the body, but said a "judicious skepticism" was allowable as to whether Eberth's bacillus was the sole cause and absolutely necessary to be present in all cases.

DR. JAMES E. REEVES said it was undoubtedly a fact that the malarial influence was slowly but surely traveling northward.

DR. J. A. LONG, of Long's Mills, Tennessee, related his experience in McMinn County, Tenn. The fevers there had all the symptoms of typhoid fever. There were many non-typical cases. Some were cases of typhoid in a malarial diathesis. He believed that some cases of malarial fever continued because quinine was given in too small doses.

DR. H. BERLIN, of Chattanooga, presented some micro-photographs as an evidence of the existence of microbes in these fevers.

DR. GEO. A. BAXTER, of Chattanooga, suggested the use of salol and naphthol in their treatment.

DR. J. B. MURFREE, of Murfreesboro, Tenn., thought it was impossible to have two fevers at once. He said there was no typho-malarial fever. We have mild cases of typhoid as well as of other fevers. The use of antiseptics is the proper method of treating typhoid, together with proper nutrition and stimulation.

DR. REEVES asked Dr. Murfree if he thought typhoid was contagious. DR. MURFREE said it was to a certain extent.

DR. P. D. SIMS, of Chattanooga: Our fevers are not all either malarial or typhoid. We have another fever dependent upon filth. It may be

called *sewage* or *drainage* fever. It is adynamic in type and is liable to take on most of the symptoms of specific typhoid fever. This is the fever now upon us, arising from the continued and increasing pollution of our water supply from sewage sources.

DR. T. Y. PARK, of Peavine, Ga., suggested that as these fevers presented the symptoms of both fevers, it was practical to use the term typho-malarial, as we cannot make the public understand the technical points of difference and we cannot examine our cases for the microörganisms.

DR. GEO. A. BAXTER, of Chattanooga, presented a paper on

SILICATE OF SODA, SOME NEW METHODS OF USE IN SURGERY.

The paper chiefly had reference to a silicate jacket made by a new process of hardening the silicate, which it is claimed is an improvement on all other jackets inclusive of the plaster-of-Paris, woven wire, or watch spring now in use for the treatment of spinal injuries or disease. It is lighter, equally durable, equally immobile when on, and capable of removal at any time, and of adjustment to any lateral pressure desired.

AFTERNOON SESSION.

The Association was called to order at 2 P. M., by the President.

DR. RICHARD DOUGLAS, of Nashville, Tenn., contributed a paper on

ABSCESS OF THE LIVER.

He said that abscess of this organ is the result of absorption of some morbid product from the intestine, or from some ulcerated surface. The bacteria enter the circulation and are deposited in the liver where abscess is formed. This may be with a normal temperature.

Case—Four months after an attack of typhoid the patient had a chill, slight pyrexia, a trace of jaundice, this lasting only a few days. There was a globular swelling in the right hypochondriac region. The only symptoms were a dull heavy pain and tenderness. No general local disturbance. Diagnosis confirmed by aspiration. A free incision let out eight ounces of inodorous pus. Recovery in four weeks. In these cases the adhesions are diagnosed by palpation. When pus is detected it should be evacuated at once. Bleeding per aspiration needle or leeches applied to the abdomen he considers useful, although there is some risk attending aspiration.

DR. G. W. DRAKE said that phagocytosis may furnish an explanation of the occurrence of abcesses in the various tissues and organs of the body, including the liver. The abscess may be a circumscribed locality in which was waged the hardest fought battles between the phagocytes and microbes, containing the disorganized remains of the slain, together with the products of decomposing tissue cells and microbes, under the dominion of chemical force, the flow of nerve-force into the contents of the pus cavity being interrupted, or the nerve force transmuted into chemical force, if the doctrine of correlation of physical may be extended to include nerve force.

DR. E. E. KERR, of Chattanooga, reported a *Case of Gall Stones*.

DR. J. B. MURFREE, of Murfreesboro, read a paper on

UTERINE FIBROMA.

He said a uterine fibroma is a morbid growth developed within the walls of the uterus, and is composed of muscular fibro-cells, fibro-plastic material and cellular tissue, and is due to a perversion of nutrition. It is non-malignant and homologous in its structure. Pain, hæmorrhage, rectal and cystic irritations, indigestion, dropsy and exhaustion are some of its results. They threaten life by hæmorrhage, inflammation, septicæmia and pressure.

The treatment is divided into four methods: 1. Symptomatic; 2. General (by medicine); 3. Electrolysis; 4. Surgical.

By the first method we simply treat the symptoms as they arise and ward off threatened dangers. Hæmorrhage is the most troublesome symptom and is best treated by quietude, opiates, etc. The hot douche and the tampon are useful.

The general treatment is by the administration of medicines to cause the absorption of destruction of the tumors. Medicines are powerless to cause the absorption of a fibrous tumor and do no good, except to build up the general system. Ergot is given to cause the death and expulsion of the tumor. Dr. Murfree has no confidence in ergot for this purpose.

The treatment by electrolysis has met with some success and is worthy of trial. It is especially adapted to the interstitial variety.

Surgical treatment is most usually resorted to for the permanent relief of uterine fibroma. It consists in the removal of the tumor by traction, torsion, excision, enucleation, ecrassement and hysterectomy. When the tumor projects into the uterine cavity it is best removed by excision. When it is interstitial it should be treated by electricity. When subperitoneal it had better be let alone unless the woman's life is a burden and death is threatening when it should be removed through a laparotomy or by hysterectomy. Hysterectomy should never be resorted to as an ideal operation, but only as a forlorn hope. But conditions do arise when it is eminently proper and should unhesitatingly be performed.

DR. WM. H. WATHEN, of Louisville, Kentucky, said the more frequently he goes into the pelvis the more often does he find that his diagnosis is not the same as it was before he had operated. Apostoli's method he considered dan-

gerous in private practice. To be successful one must be one of the most exclusive specialists. The tumor may be lessened in size, but there were, as far as he knew, no cures. A fibroma should not be interfered with unless it gives trouble.

DR. RICHARD DOUGLAS wished to emphasize what Dr. Wathen had said regarding Apostoli's treatment. From observation at his clinics and enquiries in the hospitals in Paris, he had not found any cases that were cured, but he had heard of two cases that died as the result of the treatment, one of them being in the practice of Dr. Keith, of London.

DR. L. P. BARBER, of Tracy City, Tenn., said that Apostoli's method was certainly of great promise, notwithstanding the remarks of Drs. Douglas and Wathen. He saw something of the results of the treatment during the past summer, and he had the following results from his friend, Dr. Franklin H. Martin, of Chicago. Of 200 cases, three only received no benefit. About 14 per cent. received some benefit for a time, but this finally ceased. 84 per cent. were symptomatically cured, with a number of cases of actual cures. Dr. Martin has had no deaths in all his experience with electricity as compared with the results of hysterectomy and the use of the knife generally. The result, to the unprejudiced, Dr. Barber thinks, is certainly in favor of the use of electricity in the right hands.

DR. MURFREE, in closing, said he felt that much could be accomplished by Apostoli's method.

DR. WM. H. WATHEN followed with a paper entitled

LAPAROTOMY *versus* ELECTRICITY IN ECTOPIC PREGNANCY.

He said that electricity, the only fœticidal means now recognized as orthodox by physicians who practice destroying the life of the fœtus in ectopic pregnancy without laparotomy, is no longer used for this purpose where the pregnancy has continued beyond three and a half or four months, and it is seldom used after the third month. At this time the fœtus cannot be killed except by electro-puncture, and the complications and the deaths consequent upon this practice have been so numerous that the most radical advocates of electricity are afraid to introduce the electrodes into the gestation sac. The use of electricity in extra-uterine pregnancy is practically confined to the United States, and while it is advocated by men of recognized ability and learning in obstetrics and gynecology, he was constrained to believe that very soon it will have no support.

Dr. Wathen here entered into an argument in favor of laparotomy, for the difficulty and sometimes the impossibility of diagnosticating extra-uterine pregnancy in the early months is so manifest to experienced physicians, that it would be ridiculous to claim that in all these cases pregnancy existed; while in the cases where laparotomy is done a diagnosis may positively be made by seeing the embryo or the chorionic or placental villi. If the embryo or fœtus in an extra-uterine pregnancy is killed by electricity, a more or less diseased condition of the pelvic structures is left that endangers the health or life of the woman; the dangers usually being increased as pregnancy advances. But if a laparotomy is done there is no obstructed tube, or other pathological condition left, and if the woman recovers from the immediate effects of the operation she is entirely cured. Her life is no longer in jeopardy because of the danger of pelvic abscess, sepsis, or exhaustion following an effort to discharge the suppurating contents of the gestation sac through fistulous tracts in the rectum, vagina, bladder or through the abdominal walls. If we could eliminate the cases where there was an error in diagnosis we would find that the mortality from the use of electricity and the bad after results are far in excess of what follows laparotomy in the practice of experienced operators.

EVENING SESSION.

The Association met in Stone Church, and was called to order at 7:30 P.M.

An Address of Welcome was delivered by Dr. G. W. Drake, which was responded to by Dr. G. C. Savage, of Nashville.

Then followed the *President's Address*, entitled

THE DOCTOR.

He said that the man that starts out to be a doctor must understand that it is a life of toil. There is no flowery way to the royal degree of excellence. The laggard, the indolent, the careless never enter the temple of fame. The sluggard never tastes of the royal feast spread for the earnest, industrious worker. He knows nothing of the grandeur of mental comprehension of the real medical scholar. The doctor must be educated, not as that term seems to be understood in these days. Modern education, Dr. Cowan feared, was too much a process of stuffing and cramming. The word education meant more than this. To educate was to draw out, to enlarge, to expand, to develop, and to strengthen.

THIRD DAY—MORNING SESSION.

DR. T. HILLIARD WOOD, of Nashville, Tenn., contributed a paper on

HYPERTROPHY OF THE TONSILS,

in which he said the treatment adopted for relief of hypertrophy of the tonsils had been subject to many variations. The treatment for the reduction of enlarged tonsils was divided into local, constitutional and operative. If the enlargement be due to swelling of the mucous membrane or to

engorgement and congestion of the tonsil, the application of astringents may be of service. The most useful local remedies in the hands of the author are the sub-sulphate and the perchloride of iron, about one to six or eight in water or glycerine, and alum or tannin in powder. But where there is real overgrowth, the remedy, as Mackenzie well observes, must be of a destructive character, and escharotics, not astringents, must be used. Among escharotics, London paste is useful and should be applied once or twice a week. This will produce a slough, and repeated applications will reduce the gland to a normal size.

Constitutional measures to effect reduction of the tonsils includes remedies to combat the diathesis upon which the enlargement often depends, such as iodide of potassium, cod liver oil and the general tonics, as the preparation of iron, and the bitter tonics.

With reference to operative treatment, excision by the tonsillotome is most popular, although the writer prefers the bistoury and vulsellum forceps. The operation is rendered painless by applying to the tonsil a solution of cocaine, and by injecting, with a hypodermic syringe, a few drops of the same solution into the substance of the gland. As a rule, general anæsthetics should not be used. To reduce to a minimum the danger from hæmorrhage, we have comparatively bloodless operations by the cold snare, igni-puncture, and the galvano-cautery amydalatome. Of these the galvano cautery amydalatome seems preferable, and is highly recommended by Wright, of Brooklyn. Igni-puncture is tedious, requiring repeated applications, and attended by considerable pain. Moreover, it cannot be employed in the cases of refractory children.

Dr. N. C. Steele, of Chattanooga, said the amount of hæmorrhage depended upon the condition of the tonsil. He would use the bistoury in adults and the tonsillotome in children.

Dr. E. T. Camp has been able to reduce hypertrophied tonsils without operation, by using iodized phenol locally and general remedies.

Dr. Geo. A. Baxter suggested painting the tonsil with flexible collodion.

Dr. Savage said there were two indications for operating upon the tonsils, viz.: repeated attacks of tonsillitis, and where breathing was interfered with. He uses only Mathews' tonsillotome. Never uses cocaine. From personal experience and observation he knew the operation was not very painful.

Dr. Gahagan suggested cold food in cases of incipient tonsillitis and plenty of cold liquids.

Dr. Reeves thinks in removing the tonsils we leave cicatricial tissue and so alters the voice. He uses tincture of iodine. He thinks cocaine will not control the hæmorrhage.

Dr. Willis F. Westmorreland, of Atlanta, Georgia, said the frequency of enlarged tonsils was due to exposure, hence the greater number of cases observed in males. He would operate as soon as they gave trouble. He prefers the bistoury. Cocaine he has abandoned on account of increased bleeding. Igni-puncture was too painful.

Dr. Frank Trester Smith, of Chattanooga, resorts to igni-puncture where he cannot get consent to excision. Bleeding after the use of cocaine may continue for a long time. He said the indications for operating with him were interference with breathing, impairment of the voice, and recurrent tonsillitis. The voice after operation improved as a rule.

Afternoon Session.

Dr. E. A. Cobleigh, of Chattanooga, read a paper entitled

A Case of Remarkable Injury with Recovery,

and exibited the patient.

The following history was obtained while Dr. Cobleigh was making a physical examination: "An old well used for supplying boilers with water had been inadequate for the purposes of a rapidly enlarging factory in Chattanooga, and for a considerable period of time work had been going on in the way of deepening said well till it had reached sixty feet below the surface. During the day a heavy steel drill had become so dull that another and smaller one had been substituted for it while the larger one went above for grinding on the power grindstone near the mouth of the shaft. This had been sufficiently sharpened, a loop of rope fastened around it, and a fellow workman was lowering it to the men below when the noose loosened at a depth of about ten feet from the surface, slipped off, and let the implement go dashing down on the men at the bottom with no warning worth mentioning, and it had struck the patient, after falling about forty-five or fifty feet.

At the bottom of the well some of the men were holding the drill (then in use), while the wounded fellow was standing upright on a rough little platform about eighteen inches high, which had been built to afford the striker an elevation from which to wield his sledge to the best advantage.

The implement went down sharp and nearly or quite perpendicular. It struck the man on the back of the neck and ploughed through the tissues to emerge from the right side of the chest, there protruding about eight inches, absolutely impaling him. He stepped down from the platform, supporting himself against the side of the well, and called on a fellow workman to pull out the drill. A stalwart negro with both hands tried to pull out the drill, but failed. He mounted the platform and tried again by a steady pull, which did not budge the impaling instrument; and in

his excitement to get the thing out, he gave it that to and fro motion, with the powerful leverage of the long handle, which one sees resorted to in pulling posts out of the ground. At this procedure the drill loosened and he extracted it from above, just the reverse to its direction of entry.

The patient was now placed in a bucket, very imperfectly fastened to the well rope with a noose passed around him, and holding himself mostly by his own efforts was drawn to the surface, placed in a chair and conveyed to the work-room adjoining the office. The patient is 28 years of age, stands five feet and eleven inches high, weighs 185 pounds, and has a magnificent physique.

Examination developed the fact that the wound of entrance was situated one and one-half inches to the right of the spinous process of the fifth cervical vertebra, just at the point where his neck began to broaden toward the shoulders, and the drill had only missed the spinal column by a hair's breadth. Passing downward and very slightly forward and to the right, leaving rather a smooth opening oval in form from above (perpendicularly), with somewhat inverted edges, it resembled the old-fashioned wounds of entrance of round shot, not very large—not so immense as one would expect from the size of the wounding instrument, yet sufficiently so for the cervical muscles and fascia to show plainly in the wound, especially if forcibly opened. The shape of the wound made it close like a valve, yet air was entering and being expelled with a pink froth at nearly every respiratory effort, though there was no considerable hæmorrhage.

From here the drill passed into the chest cavity between the scapula and the clavicle, at its very apex, without damage to either of these bones, impinging on the third and fourth ribs, which were both fractured from behind right in the line of the wound—evidently the fragments being parted as by a wedge while the drill was *in situ*—then passing down on the anterior and outer surface of the fifth and sixth ribs without injury to either, and emerging by a great gaping and ragged wound, with much eversion of its edges, just at the inferior border of the latter rib and over the interspace below, its centre being at the time of the examination two inches below and one and a half inches to the right of the nipple. There was only moderate bleeding from the wound, into the opening of which Dr. Cobleigh readily introduced the tips of three fingers, and no air was escaping here. The skin and subcutaneous tissues seemed to be so absolutely deadened by the magnitude of the injury sustained as to have absolutely lost all their normal elasticity. He passed two fingers up the tract of the wound their full length, entering the pleural cavity with their tips under the broken ends of the lower fractured rib, which could be distinctly felt. Everything felt torn and indefinite, the ends of the broken bone easily removable, but he was not able by touch to satisfy himself with any degree of reasonable force whether the subjacent lung surface was injured or not, though he thought it was. From top to bottom of the wound in its entire length it measured in a direct line at that time fourteen and a half inches, and the patient must have had buried in his anatomy fourteen and a half inches of steel, an inch in diameter.

On withdrawal of the fingers the wound closed by collapse of its sides, and prevented any profuse degree of hæmorrhage externally. There was intense pain and a marked degree of shock, as shown mainly by the pulse, the mind remaining clear throughout. The integument, however, was quite clammy, and the patient complained of a great deal of chilliness, without any pronounced rigor. There was extreme rapidity and difficulty of respiration, some gasping, and Dr. Cobleigh was strongly of the opinion that the patient would die in a short time, especially as he found the signs of depression increasing rapidly, the pulse losing all tone, flickering, irregular, intermittent, and the mucous surfaces blanching.

DR. WILLIS F. WESTMORELAND, of Atlanta, Ga., read a paper on *Morbid Reflex Neuroses Amenable to Surgical Treatment.*

DR. H. CRUMLEY, of Chattanooga, presented a case resembling epilepsy, which was examined by members of the Association.

DR. J. R. RATHMELL, of Chattanooga, reported a *Case of Abscess of the Liver.*

Dr. Rathmell also reported a *Case of Typhoid Fever*, and Dr. W. C. Townes, of Chattanooga, presented specimens of the intestines, spleen and mesentery of the case.

DR. TOWNES then followed with a paper on *Dilated Cardiac Hypertrophy, with Nephritic Complications*, illustrating his paper by specimens of the condition and others for comparison.

EVENING SESSION.

DR. R. J. TRIPPE, of Chattanooga, reported a *Case of Peritonitis*, which occurred in a strong, muscular, heavy-set negro, who had been struck with a crowbar across the abdomen. Patient died.

DR. C. H. HOLLAND, of Chattanooga, reported a *Case of Phlegmonous Abscess*, occurring in an unusually large man, 25 years old, 6 feet high, and weight 349 lbs.

DR. J. H. ATLEE, of Chattanooga, followed with the report of a *Case of Ovariotomy.*

DR. FRANK TRESTER Smith read a paper on *Flourescein in the Diagnosis of Diseases of the Eye.*

DR. J. E. PURDON, of Cullman, Ala., contributed a very elaborate paper on the *Dynamics of Mediumism*, and, after a long and careful study of the subject, drew fifteen conclusions.

DR. W. C. MAPLES, of Bellefonte, Ala., read a paper on

SOME IRREGULAR FORMS OF EPILEPSY, WITH REPORT OF A CASE.

He thinks his case was either one of epilepsy or hystero-epilepsy. In some respects it closely resembled hystero-epilepsy. His reasons for thinking it a case of epilepsy were:

1. The amount of fever. In hystero-epilepsy there is generally but little or no fever. Some authors hold that we may have a true hysterical fever, but the weight of authority is against that opinion. 2. The complete unconsciousness. 3. The biting of the tongue. Hystero-epileptics seldom or never injure themselves. 4. The facial expression and pupillary phenomena. The facial expression is generally calm and serene throughout a hystero-epileptic attack. 5. The absence of hysterical phenomena in the intervals between the attacks. 6. The sex. While hystero-epilepsy does occur in males, all authors are agreed that it does so quite seldom.

The treatment was by large doses of bromide of potassium by the mouth, and morphine hypodermatically. There were no sequelæ.

DR. J. D. GIBSON, of Birmingham, Ala., presented a paper on

URETHRAL STRICTURE AND ITS COMPLICATIONS.

In the use of sounds, he considers the spherical, or the acorn-pointed sound, the most convenient and practical instrument for the detection of stricture; while Otis and Weir and many others had their special instruments. Dr. Gibson said that if he were compelled to use only one instrument in the cure of all strictures, he would use the sound. He believed that when it was properly used, that there were very few strictures that could not be relieved, and better so by it than any other means; and that the only stricture necessary to invoke the aid of the urethrotome was the old, tight and unyielding stricture in the pendant urethra and meatus. Young and inexperienced men were apt to be disappointed in the use of the sound, simply because they tried to go too fast; the idea should be to dilate the stricture and produce absorption, and not rupture. Internal urethrotomy, while often abused, was a most potent means of treating urethral stricture, it being especially applicable for old and firm strictures in the pendant urethra and meatus.

DR. P. S. HAYES, of Chicago, followed with a paper entitled

NOTES ON APOSTOLI'S METHOD OF THE TREATMENT OF UTERINE FIBROIDS.

He said that one of the best demonstrated facts in the Apostoli operation was the arrest of all uterine hæmorrhages, excepting those cases that are due to puerperal condition. All observers unite in recognizing that the positive pole is the one to be connected with the intra-uterine electrode. To the thinking physician the query is, why the positive? And the answer comes that in electrolysis, especially when the electrolyte—the fluid undergoing electrolysis—is blood, the clot formed around the positive pole is small and dense, while that around the negative pole is large and flabby. Knowing as we do that oxygen, chlorine and the acids are liberated at the positive pole when electrolysis is performed on the tissues of the body, and also knowing that hydrogen and alkalies are liberated around the negative pole, we have only to apply our knowledge of the action of the acids and alkalies respectively on the blood to explain the observed phenomena.

The occurrence of uterine hæmorrhage does not contra-indicate the use of the method. One of his patient's suffering from menorrhagia came to his office stating that she was drenched with the discharge and came for relief, as it was much easier to come to his office than to go home. The excessive flow did not occur until after she had come down town. Dr. Hayes used the intra-uterine electrode connected with the positive pole, and allowed a current of from 60 to 80 milliampères to pass for eight minutes. The patient then went home, a distance of three miles, and was in bed the remainder of the day. The next day she was about the house and the flow had nearly ceased. This period was by far the least severe she had had in several months, and the amount of time spent in bed was three-fourths less. The flow was diminished in like amount. Should opportunity again offer itself to use Apostoli's method during a non-puerperal hæmorrhage, Dr. Hayes said he would not hesitate to use it as the best means of securing its arrest.

NECROLOGY.

ARTHUR B. CARPENTER, M.D., of Cleveland, O., died suddenly at his residence October 15, at the age of 37, of fatty degeneration of the heart. Up to within three hours of his death he appeared in robust health. Dr. Carpenter was eminently a self-made man, of commanding presence and genial address; he had obtained a large practice in the domain of gynecology, to which subject he had contributed many valuable articles. He was an active worker and took a prominent position in the local and national medical societies. In his untimely death the medical profession of Ohio has lost a most valuable member. According to an expressed wish his remains were cremated at Buffalo.

HENRY JACOB BIGELOW, M.D., L.L.D., died at his summer home in Newton, Mass., October 30, aged seventy-two. He was educated in the

Boston Latin School and the Harvard Medical College (Class of 1841), besides seeking further instruction in foreign cities. Later, he was for a long time surgeon to the Massachusetts General Hospital;, and for twenty years he filled the chairs of surgery and chemical surgery at Harvard without an assistant. He was active in the earlier experiments with anæsthetics, and in November, 1846, made the original announcement in this country of their discovery. He has been an extensive writer and lecturer on surgical topics. One of his works on the mechanism of dislocation by the flexion method (1869) is still an authority. He contributed many valuable papers to the American Medical Association, such as the "Action of Water on Lead Pipes;" articles on Anæsthesia, embracing its statistics, "Cinchonia Cultivation," "Gutta Percha in Urethral Strictures," "Operation for Hernia," and a very suggestive treatise on "Nature and Disease." The above, however, lays no claim to being a complete list. Dr. Bigelow's labors and attainments secured for him membership in many American and European societies, among them the American Academy of Arts and Sciences, the Société Anatomique, the Société de Biologie and the Société de Chirurgie of France. A sister and a son, Dr. Wm. S., of Boston, survive him.

DR. MONTROSE A. PALLEN died in New York, on October 1. He was born January 2, 1836, in Vicksburg, Miss. His father, a Virginian, was professor of obstetrics in the St. Louis Medical College for twenty-seven years. Dr. Pallen received his medical education at the St. Louis University, from which he graduated in 1856. He spent two years in the medical schools and hospitals of London, Paris and Berlin, and then settled in St. Louis, where he remained till 1884, when he was called to the chair of gynecology in the medical department of the University of the City of New York. During the war Dr. Pallen was medical director of Gen. Henry A. Wise's Legion in 1861, of Gen. William J. Hardee's army corps in 1862, and later of the Department of Mississippi until February, 1863. Subsequently he was sent to Canada by the confederate government to report on the condition of the confederate prisoners on Johnson's Island. He returned to Richmond in 1864, went to Paris, and obtained surgical and medical supplies for the confederate armies. He was sent to Montreal again, but was captured on his way back to the South, and held on parole in New York until the end of the war. He was professor of gynecology in the Humbolt Medical College in 1866–67, adjunct professor of obstetrics in the St. Louis Medical College 1867–68, professor of gynecology in the St. Louis College of Physicians and Surgeons 1869–70, professor of anatomy in the Missouri Medical College 1871–72, and professor in the medical department of the University of the City of New York 1874–82. In 1883 he assisted in forming the Post-Graduate Medical College. He also served as surgeon to the Charity Hospital.

BOOK REVIEWS.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY. Twenty-fifth Annual Meeting, held at Grand Rapids, June 19 and 20, 1890.

The volume opens with a fine steel engraving of its President, Dr. George E. Frothingham, of Detroit, and the annual address delivered by him had reference to "The Desirability of Extensive Organization, and Pursuit of a Fixed Policy, as a Means of promoting our Professional Interests." The necessity of organization as a means to success is fully discussed. The creation of the State Board of Health was the result of organized effort, and special reasons for the enlightenment of the people exist in that State by reason of the relations of medicine to the State University. He deals ably, severely and justly with sectarian medicine, and emphasizes the necessity for a higher estimate of scientific studies in the attainment of a liberal education.

The annual address on Surgery was delivered by Dr. J. F. Groner, of Big Rapids, upon "The Causes of Suits for Malpractice and their Remedies." The measure of the surgeon's responsibility is clearly set forth, and citations of judicial decisions are made, and as an important means for the prevention of malpractice suits he advises the enacting of "a law compelling the plaintiff to give bonds to remunerate the defendant a certain percentage of amount for which the suit was brought, providing he fails to sustain his case."

Dr. W. F. Breakey, of Ann Arbor, delivered the annual address on practice of medicine, his subject being "The Mutual Obligations and Responsibilities of the Physician and the People in promoting Medical Science." He discusses the means of promoting such advancement and fully considers the subject of legitimate and illegitimate advertising, as related to medicine and surgery. The relations of legislation are well considered, and the Code of Ethics has an endorsement that should require nothing further in its vindication. He says: "In the majority of cases it is the violator of the Code who violates the code of gentlemanly and honorable conduct."

The subject of the annual address on obstetrics and gynecology, presented by Dr. J. N. Martin, of Ann Arbor, was that of "The Relations of Constitutional Conditions to Diseases of the Female Genital Organs." Mental conditions and influences are ably considered in connection with

the varying conditions of these organs, as well as the more prominent sympathetic relations with other organs and the reciprocal influence upon the general health.

The proceedings and the papers presented in the Sections during the two days form a volume of nearly five hundred pages. The high order of merit obtains both in the papers presented and in the discussions which follow. The arrangement and the publication reflect credit upon the Editor, Dr. Charles W. Hitchcock, of Detroit, and the publishers. The Michigan State Medical Society has a fine record in the past and the promise of a splendid future.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES: A YEARLY REPORT OF THE PROGRESS OF THE GENERAL SANITARY SCIENCES THROUGHOUT THE WORLD. Edited by CHARLES E. SAJOUS, M.D., and seventy associate editors; assisted by over two hundred Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. In 5 Volumes. Philadelphia, New York, Chicago, Atlanta, and London: F. A. Davis. 1890.

We doubt whether the medical profession at large appreciates at what an immense expense of time, talent and labor this valuable annual has been brought out. The publisher, F. A. Davis, has shown a most commendable enterprise both in the venture he has made and in the admirable manner in which he presents these five volumes to the profession. The preparation of such an annual review of the entire domain of medical science has only been possible by reason of the rare ability of the editor-in-chief, with the assistance of an immense staff of sub-editors, embracing a large number of the ablest medical writers in America, the enumeration of whose names would stand for the best possible commendation of the entire work.

In these five volumes we have the cream of medical literature, and the very latest of investigations for the current year. Over eight hundred journals in all the civilized languages are made to contribute to this enterprise. Rare discrimination is manifested by the sub-editors in the selection and presentation of their individual work, and under each general head all that is essential, fresh and valuable comes to the reader in a most available form.

It is impossible to particularize, but after an extended and careful examination of the several volumes, we have only words of commendation for the entire work.

The methods of reference are simply perfect. With such a library, for instance, as that of the "Newberry" at command, by the aid of these volumes, ready reference can be made to all the important papers written in any modern language on any special subject during the last current year—the essential points being here reproduced.

No public library should be without the series, and no man in our profession who desires to keep himself fully abreast of the times can afford to dispense with this representative of all the leading journals in the world.

The American profession is indebted to the editor, and to his corps of sub-editors, and to the enterprise of the publisher, for the presentation of an Annual for 1890, such as is nowhere else to be found either at home or in Europe.

We earnestly hope that this work will be so fully appreciated, and the encouragement be such, that the enterprise will be carried forward year by year for the benefit of the profession and for the credit of American medical literature.

PRACTICAL ELECTRICITY IN MEDICINE AND SURGERY. By S. A. LIEBIG, JR., Ph.D., Assistant in Electricity, Johns Hopkins University; Lecturer on Medical Electricity, College of Physicians and Surgeons, Baltimore; Member of the American Institute of Electrical Engineers, etc., and GEORGE H. ROHÉ, M.D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore; Visiting Physician to Bay View and City Hospital; Director of the Maryland Maternité; Associate Editor *Annual of the Universal Medical Sciences*, etc.

In part one of this new book is considered, 1, Electricity; 2, Magnetism; 3, Batteries; 4, Storage Electricity, etc. In Part I the authors say "are discussed the various forms of electrical and magnetic apparatus likely to be of use to the physician in his daily experience with electricity, as well as the most suitable arrangement of cells for any given work, the construction and use of galvanometers, the theory of the chemical actions taking place in the storage-cell or accumulator, and the best methods of caring for the batteries."

Part II discusses: 1. Electro-Physiology; 2. Electro-Diagnosis; 3. Electro-Medical Apparatus. This section "takes up first the effect of electric currents upon the various tissues and organs of the body in health, then shows how these effects are modified by disease, and indicates the methods by which these modifications are utilized for purposes of diagnosis." A chapter follows descriptive of the various appliances most useful in electro-therapeutic work, which may be considered as immediately introductory to the section on electro-therapeutics.

Part III contains chapters on, 1. General Therapeutic Effects of Electricity and Methods of Application; 2. Special Electro-Therapeutics; Appendix and Index. Part III, then, discusses the application of electricity in the treatment of disease. The methods by which electricity is made available for therapeutic purposes are described, and in subsequent chapters the modes of applica-

tion of this agent in the treatment of the diseases of the various organs are indicated. Particular attention has been given to the applications of electricity in gynecology, diseases of the male genito-urinary organs, and in diseases of the skin.

UEBER FEUERBESTATTUNG. — Vortrag gehalten am abende des 13 Februars, 1890, im Naturwissenschaftlichen Vereine zu Mülhausen im Elsasse. By PROF. DR. FRIEDRICH GOPPELSROEDER. With 5 wood cuts and an appendix. Pp. 108. Mülhausen: Wenz & Peters.

In this small monograph we have a critical review of the subject of cremation from a hygienic as well as historical standpoint. The author first considers the various methods of disposing of the dead: mummification, embalming, and various other methods of preserving bodies, as well as earth burial, and their rapid destruction by chemical means. Then follows a lengthy review of cremation in ancient times, as well as its progress of late years in different parts of the world. The volume closes with an excellent chronological list of the publications relating to cremation.

It has been said that "comparisons are odious," and it would be invidious to say aught against this work, especially as it has been written with a charitable object; as we are informed on the title page the net receipts of the sale of the work are to be devoted to maintaining the vacation colony for poor and sick children located in Mülhausen. The author has, however, chosen a subject already worn threadbare, and although we have earnestly sought for the *raison d'être* within the covers, we can but think that the work is justified by the noble object for which it was undertaken, and which we trust that it will in a great measure fulfil.

STORIES OF A COUNTRY DOCTOR. By WILLIS P. KING, M.D.

None but the doctor who had been there could have written this book, and hardly one of a thousand at that. Frontier life here has many a graphic description. The real is often more tragic than the unreal, and the sublime, the ridiculous, the humorous and the pathetic are oftentimes artfully and strangely commingled. While neither the writer, who sees so much of the humorous side of men and things, nor his patients, will be apt to die of dyspepsia yet the undertow of influence is always in the right direction, and many a rattling sermon is found in an unsuspected place. His chapter on consultations is drawn to the life, and as to the Code of Ethics—bearing in all relations of society and among men of every vocation—he rates it as the highest law in the universe outside the Bible, and if the authority of the Bible be not recognized, then surely as the highest law imaginable. Ethics, as related to medicine, holds doctors not only to a strict accountability for their conduct one with another, but holds them just as firmly to a strict accountability for their conduct towards their patients and the public generally. He says "if the people generally understood the Code as every good physician ought to understand it, they would all be strong advocates of it." Upon this subject Dr. King is eminently sound. In his closing chapter he pays his respects to quacks and quackery in a way true to life and highly amusing. The book is published by the Hudson-Kimberly Publishing Co., Kansas City, Mo., contains 400 pages, and is well illustrated.

MISCELLANY.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from November 1, 1890, to November 7, 1890.

First Lieut. Nathan S. Jarvis, Asst. Surgeon, so much of Par. 2, S. O. 208, A. G. O., September 5, 1890, as directs him to temporary duty at San Carlos, Ariz. Ter., is revoked. On the expiration of his present sick leave of absence, Lieut. Jarvis will report in person to the commanding officer, Ft. Bayard, N. M., for duty at that station. Par. 13, S. O. 254, A. G. O., October 30, 1890.

First Lieut. Philip G. Wales, Asst. Surgeon, is relieved from station and further duty at Ft. Huachuca, Ariz. Ter., and assigned to duty at San Carlos, Ariz. Ter., where he is now temporarily serving. Par. 13, S. O. 254, A. G. O., October 30, 1890.

Capt. William J. Wakeman, Asst. Surgeon, is relieved from duty at Ft. Bidwell, Cal., to take effect on the final discontinuance of that post, and will then report in person to the commanding officer, Ft. Huachuca, Ariz. Ter., for duty at that station. Par. 12, S. O. 254, A. G. O., October 30, 1890.

Capt. William H. Arthur, Asst. Surgeon, is relieved from duty at Ft. Bayard, N. M., and will report in person to the commanding officer, Ft. Grant, Ariz. Ter., for duty at that post, relieving First Lieut. William B. Banister, Asst. Surgeon. Lieut. Banister, on being relieved by Capt. Arthur, will repair to this city, and report for duty to the commanding officer, Washington Bks., D. C. Par. 12, S. O. 254, A. G. O., Washington, October 30, 1890.

Lieut. Col. Dallas Bache, Surgeon U. S. A., Medical Director, Dept. of the Platte, is granted leave of absence for one month. Par. 6, S. O. 82, Dept. Platte, Omaha, Neb., November 1, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending November 8, 1890.

P. A. Surgeon J. M. Edgar, ordered to the U. S. S. "San Francisco." November 10, 1890.

Asst. Surgeon L. W. Spratling, ordered to the U. S. S. "San Francisco." November 10, 1890.

Medical Inspector Chas. H. White, ordered to the U. S. S. "San Francisco." November 10, 1890.

P. A. Surgeon Horace B. Scott, placed on the Retired List October 31, 1890.

P. A. Surgeon Richard Ashbridge, surveyed and sent to Hospital, Philadelphia, Pa.

Asst. Surgeon R. M. Kennedy, detached from Navy Yard, League Island, and ordered to U. S. training ship "Richmond."

Asst. Surgeon L. W. Atlee, ordered to the Navy Yard, League Island, Pa.